Form C-141
Page 6

State of New Mexico
Oil Conservation Division

Incident ID	nAPP2114556912
District RP	
Facility ID	
Application ID	

Closure

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

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

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

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

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

☑ Description of remediation activities

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

Printed Name: Joseph Guesnier Title: Office Manager

Signature: [signature] Date: 12-9-22

email: JRGuesnier@Tetratech.com Telephone: 806-544-9276

OCD Only

Received by: Jocelyn Harimon Date: 04/10/2023

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: Robert Hamlet Date: 8/29/2023

Printed Name: Robert Hamlet Title: Environmental Specialist - Advanced

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State of New Mexico
Oil Conservation Division

Incident ID	nAPP2114556912
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Site Assessment/Characterization

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

What is the shallowest depth to groundwater beneath the area affected by the release?	60 (ft bgs)
Did this release impact groundwater or surface water?	☐ Yes ☑ No
Are the lateral extents of the release within 300 feet of a continuously flowing watercourse or any other significant watercourse?	☐ Yes ☑ No
Are the lateral extents of the release within 200 feet of any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark)?	☐ Yes ☑ No
Are the lateral extents of the release within 300 feet of an occupied permanent residence, school, hospital, institution, or church?	☐ Yes ☑ No
Are the lateral extents of the release within 500 horizontal feet of a spring or a private domestic fresh water well used by less than five households for domestic or stock watering purposes?	☐ Yes ☑ No
Are the lateral extents of the release within 1000 feet of any other fresh water well or spring?	☐ Yes ☑ No
Are the lateral extents of the release within incorporated municipal boundaries or within a defined municipal fresh water well field?	☐ Yes ☑ No
Are the lateral extents of the release within 300 feet of a wetland?	☐ Yes ☑ No
Are the lateral extents of the release overlying a subsurface mine?	☐ Yes ☑ No
Are the lateral extents of the release overlying an unstable area such as karst geology?	☑ Yes ☐ No
Are the lateral extents of the release within a 100-year floodplain?	☐ Yes ☑ No
Did the release impact areas **not** on an exploration, development, production, or storage site?	☐ Yes ☑ No

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

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

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

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

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State of New Mexico
Oil Conservation Division

Incident ID	nAPP2114586912
District RP	
Facility ID	
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I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.

Printed Name: Joseph Guebler Title: office Manager

Signature: Date: 12-9-22

email: JRGuebler@Petroleum.com Telephone: 806-544-9276

OCD Only

Received by: Jocelyn Harimon Date: 04/10/2023

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State of New Mexico
Oil Conservation Division

Incident ID	nAPP2114556912
District RP	
Facility ID	
Application ID	

Remediation Plan

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

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

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

- ☐ Contamination must be in areas immediately under or around production equipment where remediation could cause a major facility deconstruction.
- ☐ Extents of contamination must be fully delineated.
- ☐ Contamination does not cause an imminent risk to human health, the environment, or groundwater.

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.

Printed Name: Joseph Guenther Title: office Manager

Signature: [signature] Date: 12-6-22

email: JRGuenther@Terracon.com Telephone: 806-544-9276

OCD Only

Received by: Jocelyn Harimon Date: 04/10/2023

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

Signature: Date:

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Page 6

State of New Mexico
Oil Conservation Division

Incident ID	nAPP2114556912
District RP	
Facility ID	
Application ID	

Closure

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

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

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

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

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

☑ Description of remediation activities

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

Printed Name: Joseph Guesnier Title: Office Manager

Signature: [signature] Date: 12-9-22

email: JRGuesnier@Tetratech.com Telephone: 806-544-9276

OCD Only

Received by: Jocelyn Harimon Date: 04/10/2023

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: _____

Spur Energy Partners LLC
Aikman SWD State #001
Unit N, Section 27, T19S, R25E
NMOCD Reference # nAB1806541396, NRM2004958378, nAPP2114556912, nAPP2127753131
Terracon Project # AR207018

Closure Report

Attn: Mr. Braidy Moulder
P: 713-264-2517
E: bmoulder@spurepllc.com

RE: **Closure Report**
Aikman SWD State #001
Unit N, Section 27, Township 19 South, Range 25 East
Eddy County, New Mexico
Terracon Project No. AR207018

Dear Mr. Moulder,

Terracon Consultants, Inc. (Terracon) is pleased to submit our Closure Report. The Release Investigation, RAP and Closure Report were developed in accordance with the New Mexico Oil Conservation Division (NMOCD) regulations concerning clean-up actions required for releases of crude oil and produced water. Based on the release investigation assessment, Terracon recommends the following actions be taken to achieve protection of fresh water and the environment in accordance with NMOCD regulations. Terracon developed the Release Investigation and RAP in general accordance with our scope of work (AR207018) dated December 23, 2020.

Action Items

Completed Actions

1) Vertical and horizontal delineation was achieved during the final excavation activities at the site.
2) Confirmation samples were collected every 200 sq. ft, as outlined in the NMOCD correspondence dated January 26, 2022.
3) All impacted materials were disposed of as O&G exempt material at Lea Land waste disposal facility.
4) This Closure Report covers all four releases at the facility (nAB1806541396, NRM2004958378, nAPP2114556912, nAPP2127753131) and all have been submitted separately for each respective incident number.

Anticipated Actions

1) New Mexico Oil Conservation Division Closure of this incident.

Spur Energy Partners LLC
Aikman SWD State #001
Unit N, Section 27, Township 19 South, Range 25 East
NMOCD Reference # nAB1806541396, NRM20049558378, nAPP2114556912, nAPP2127753131

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

Sincerely,
Terracon Consultants, Inc.

Joseph Guesnier
Senior Staff Scientist
Office Manager – Carlsbad

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

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Regulatory Framework and Response Action Levels....4
Soil Investigation Discussion....5
Confirmation Sample Data Evaluation....6
Confirmation Sampling Data Summary....7

Attachments:

Appendix A – Exhibits
Exhibit 1 – Topo Map
Exhibit 2 – Site Map
Exhibit 3 – Initial Site Investigation Map
Exhibit 4 – Supplemental Site Investigation Map
Exhibit 5 – Confirmation Soil Sampling Map (Floors)
Exhibit 6 – Confirmation Soil Sampling Map (Walls)
Exhibit 7 – Confirmation Soil Sampling Map (nAPP2127753131)
Exhibit 8 – NMOSE POD Location Map
Exhibit 9 – Cave Karst Public UCP Map

Appendix B – Tables, Procedures, and Figures
Table 1 – Closure Criteria for Soils Impacted by a release
Table 2 – Soil Sample Analytical Results

Appendix C – Photographic Log
Appendix D – Analytical Report and Chain of Custody
Appendix E – Waste Manifest
Appendix F – Terracon Standard of Care, Limitation, and Reliance

Spur Energy Partners LLC
Aikman SWD State #001
Unit N, Section 27, Township 19 South, Range 25 East
NMOCD Reference # nAB1806541396, NRM2004958378, nAPP2114556912, nAPP2127753131

Incident Information

The following table provides detailed information regarding the four releases referenced at the Aikman SWD State #001 site in Eddy County, New Mexico:

Required Information	Site and Release information	
Responsible party	The facility is operated by Spur Energy Partners LLC	
Local contact	Contact: Mr. Braidy Moulder	P: (281) 795-2286 E: bmoulder@spurepllc.com
NMOCD Notification	Notice of the release was provided to the NMOCD District 2 Artesia Office by Braidy Moulder (Spur).	
Facility description	The Aikman SWD State #001 is in Eddy County, New Mexico. It is an approximate 1-acre area located within Unit N, Section 27, Township 19 South, Range 25 East, approximately 15.5 miles southwest of Artesia, New Mexico. The site was developed for oil and gas production.	
Date of incidents	nAB1806541936	02/27/2018
	NRM2004958378	01/06/2020
	nAPP2114556912	4/27/2021
	nAPP2127753131	9/16/2021
Discharge event	The cause of the releases have all been malfunctioning equipment with the exception being the most recent release caused by damage to a line during construction services. Site illustrated in Figure 2 of Appendix A	
Type of discharge	nAB1806541936	Produced Water (560 bbls)
	NRM2004958378	Crude Oil (543 bbls)
	nAPP2114556912	Produced Water (105 bbls)
	nAPP2127753131	Produced Water (120 bbls)
Quantity of spilled material	Total Fluids: 1,328 bbls	Produced Water: 785 bbls Total Petroleum Hydrocarbons: 543 bbls
Site characteristics	Relatively flat with drainage following the native ground surface; very gently sloping to the west.	
Immediate corrective actions	All releases had corrective actions immediately implemented, including the shutting in of equipment to eliminate release sources and had vacuum trucks utilized to remove standing liquids.	

Spur Energy Partners LLC
Aikman SWD State #001
Unit N, Section 27, Township 19 South, Range 25 East
NMOCD Reference # nAB1806541396, NRM2004958378, nAPP2114556912, nAPP2127753131

General Site Characteristics	
Remedial Determining Information	**Site Ranking Characteristics**
Facility description Site Map – (Exhibit 2 in Appendix A)	Aikman SWD State #001 is in Eddy County, New Mexico. It is an approximate 1-acre area located within Unit N, Section 27, Township 19 South, Range 25 East, approximately 15.5 miles southwest of Artesia, New Mexico. The site is predominantly developed for oil and gas production.
Site characteristics Topographic Map – (Exhibit 1 in Appendix A)	Relatively flat with drainage following the native ground surface; very gently sloping to the west.
Groundwater NMOSE POD Location Map – (Exhibit 6 in Appendix A)	POD Number: (RA-03304-POD1) Depth to Groundwater: 60 ft. bgs Distance to Well: 0.64 miles to the northwest Date Drilled: October 15, 1954
	Groundwater Quality: Groundwater quality at the site is predominately used for Domestic Household, but current quality is unknown
Surface Water	Brantley Lake (South-eastern Eddy County, NM), approximately 5.5 miles to the southeast.
Soil Characteristics	Soils at the site are mapped as Reagan-Upton associations, 0 to 3 percent slopes. This soil has a surface layer of gravelly loam 0 to 13 inches, cemented layer 13 to 21 inches, and very gravelly loam 21 to 60 inches. The formation being categorized as well-drained with low runoff classification.
Karst Characterization Cave Karst Public UCP Map – (Exhibit 7 in Appendix A)	Terracon evaluated data from the NMOCD Public FTP Site, Karst map designations in reference to the site location. The site appears to be within a high-level Karst risk area. Based on on-site observations within the extent of the release margins the potential for Karst formations in this specific area are of "high" potential. A layer of solid competent rock was encountered from 11 to 21 inches bgs within the release margins. The full extent of release quantities and excavation activities did extend greater than 84 inches bgs.

Spur Energy Partners LLC
Aikman SWD State #001
Unit N, Section 27, Township 19 South, Range 25 East
NMOCD Reference # nAB1806541396, NRM2004958378, nAPP2114556912, nAPP2127753131

Regulatory Framework and Response Action Levels

Oil and gas exploration and production facilities in New Mexico are generally regulated by the New Mexico Oil Conservation Division (NMOCD). The NMOCD has issued the *Closure Criteria for Soils Impacted by a Release, June 21, 2018,* and *Restoration, Reclamation, and Re-vegetation (19.15.29.13) NMAC – D (Reclamation of areas no longer in use)* as guidance documents for the remediation and reclamation of sites impacted by releases from oil and gas exploration and production activities. Sections detailed below the applicability of these guidance documents to the site-specific characteristics associated with the Aikman SWD State #001.

Reclamation Levels (Surface to 4 ft. bgs)

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

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

Remediation Levels (> 4 ft. bgs)

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

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

Spur Energy Partners LLC
Aikman SWD State #001
Unit N, Section 27, Township 19 South, Range 25 East
NMOCD Reference # nAB1806541396, NRM2004958378, nAPP2114556912, nAPP2127753131

Timeline of Releases

- nAB1806541396 (Percussion Petroleum Operating, LLC) a release of produced water occurred due to overfilling the tanks onsite on February 27, 2018. A total of 560 bbls were released and 550 bbls were recovered with vacuum trucks. The total inferred release area covered the entire bermed pad area.
    - A workplan was provided to the NMOCD on March 22, 2018, and a revised workplan was provided on April 19, 2018, both by WSP USA, Inc (WSP). The workplan was denied by the NMOCD on April 24, 2018, the main cause for denial was insufficient delineation of the release and insufficient laboratory analytical analysis.
    - There is no further evidence that delineation or remediation had been completed at this site. Terracon has addressed both the delineation and remediation with this closure report.

- NRM2004958378 (Spur Energy Partners, LLC) a release of produced water occurred due to a mechanical issue at the wellhead of the SWD on January 06, 2020. A total of 543 bbls were released and 130 bbls were recovered with vacuum trucks. The total inferred release area ran along the northern berm of the pad and pooled in the northwest corner of the bermed pad area.
    - The delineation of the site and remediation were completed at risk and the closure report was provided to the NMOCD on June 18, 2020, by Terracon Consultants, Inc. The closure report was denied by the NMOCD on September 21, 2020, the main cause of the denial was, due to an improper Karst designation at the site resulting in incorrect remediation action levels (RAL) in the closure report.
    - Terracon has addressed both the stricter RALs and remediation with this closure report.

- nAPP2114556912 (Spur Energy Partners, LLC) a release of produced water occurred due to a poly line leak at the tank battery on April 27, 2021. A total of 105 bbls were released and 100 bbls were recovered with vacuum trucks. The total inferred release area was around the south end of the bermed pad and around the tank battery.
    - Terracon has addressed this release and remediation with this closure report.

- nAPP2127753131 (Spur Energy Partners LLC) a of produced water occurred due to a line strike during construction on the east side of the facility on September 16, 2021. A total of 120 bbls were released and 119 bbls were recovered with vacuum trucks. The total inferred release area was in the pasture off the northeast corner of the bermed facility, the release did remain in the excavation.
    - The remediation of the release was completed by Wescom, inc (Wescom) on April 15, 2022.
    - Terracon has collected confirmation samples from their remedial activities and has incorporated their data as part of this all encompassing closure report.

Spur Energy Partners LLC
Aikman SWD State #001
Unit N, Section 27, Township 19 South, Range 25 East
NMOCD Reference # nAB1806541396, NRM2004958378, nAPP2114556912, nAPP2127753131

Soil Investigation Discussion

During Terracon's June 29, 2022, through November 30, 2022, confirmation sampling activities, a total of 105 soil samples were collected from the site and analyzed for BTEX, chloride, and/or TPH. A total of 57 samples were collected from within the floor of the excavations, and 48 samples were collected from the walls of the excavation evaluate the concentrations of any remaining constituents.

Confirmation Sample Data Evaluation

- **Floor Sample Data Evaluation**

Benzene was detected above applicable laboratory SDLs in one of the 57 soil samples analyzed within the floor of the excavation. The total Benzene concentration was 0.0869 mg/kg in FS-12 (7 ft. bgs to 8 ft. bgs). 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 two of the 57 soil samples analyzed within the floor of the excavation. The Total BTEX concentrations ranged from 0.0912 mg/kg in FS09 (8 ft bgs) to 0.116 in FS12 (8 ft bgs). The detected Total BTEX concentrations did not exceed the applicable NMOCD RAL for Total BTEX of 50 mg/kg, as summarized in Table 1.

Total TPH was detected above applicable laboratory SDLs in six of the 57 soil samples analyzed within the floor of the excavation. The Total TPH concentration ranged from 35.2 mg/kg in CS-16 (5 ft bgs to 6 ft bgs) to 69.5 mg/kg in (5 ft bgs to 6 ft bgs). The samples collected within the release margins did not exhibit Total TPH concentrations above the NMOCD RAL of 100 mg/kg for Total TPH, with the exception being FS09 (8 ft bgs), but additional sampling demonstrated natural attenuation of the impacts at that location, as summarized in Table 1.

Chloride was detected above applicable laboratory SDLs in each of the 57 soil samples analyzed within the floor of the excavation. The chloride concentrations ranged from 16.7 mg/kg in soil sample FS06 (8 ft bgs) to 3,120 mg/kg in soil sample FS08 (8 ft bgs). Of the 57 soil samples analyzed, eight soil samples exhibited chloride concentrations above the applicable NMOCD Reclamation Assessment Limit of 600 mg/kg but were subsequently below the NMOCD RAL following additional remedial activities, as summarized in Table 1.

- **Wall Sample Data Evaluation**

Benzene was detected above applicable laboratory SDLs in one of the 48 soil samples analyzed around the perimeter of the excavation walls. The total Benzene concentration was 0.056 mg/kg in TN-2.1 (1 ft. bgs to 2 ft. bgs). 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 two of the 48 soil samples analyzed around the perimeter of the excavation walls. The Total BTEX concentrations ranged from 0.661 mg/kg in TS-2.1 (1 ft bgs to 2 ft bgs) to 1.03 mg/kg in TN-2.1 (1 ft bgs to 2 ft bgs). The detected Total BTEX concentrations did not exceed the applicable NMOCD RAL for Total BTEX of 50 mg/kg, as summarized in Table 1.

Total TPH was detected above applicable laboratory SDLs in 13 of the 48 soil samples analyzed around the perimeter of the excavation walls. The Total TPH concentration ranged from 12.6 mg/kg in TS-1.1 (1 ft bgs to 2 ft bgs) to 886 mg/kg in W-2 (2 ft bgs to 3 ft bgs). The samples collected within the release margins did not exhibit Total TPH concentrations above the NMOCD RAL of 100 mg/kg for Total TPH, with nine initial confirmation samples being over the RAL but additional remedial activities brought all final samples below the RAL, as summarized in Table 1.

Chloride was detected above applicable laboratory SDLs in 44 of the 48 soil samples analyzed around the perimeter of the excavation walls. The chloride concentrations ranged from 32 mg/kg in soil sample TN-2.1 (1 ft bgs to 2 ft bgs) to 6,400 mg/kg in soil sample TN-1 (1 ft bgs to 2 ft bgs). Of the 48 soil samples analyzed, 12 soil samples exhibited chloride concentrations above the applicable NMOCD Reclamation Assessment Limit of 600 mg/kg but were subsequently below the NMOCD RAL following additional remedial activities, as summarized in Table 1.

Confirmation Sampling Data Summary

Based on the review of the above release investigation analytical results, the presence of petroleum hydrocarbon constituents (Benzene/BTEX) were not detected at concentrations above applicable NMOCD Reclamation and/or Remediation Action Limits.

Of the 105 soil samples analyzed, 10 soil samples exhibited TPH concentrations above the applicable NMOCD Reclamation Action Limit of 100 mg/kg. Following additional remedial efforts at the site, all the final soil samples analyzed for TPH were below the NMOCD Remediation Action Limits for TPH.

Of the 105 soil samples analyzed, 20 soil samples exhibited chloride concentrations above the applicable NMOCD Reclamation Action Limit of 600 mg/kg. Following additional remedial efforts at the site, all the final soil samples analyzed for chlorides were below the NMOCD Remediation Action Limits for chlorides.

It has been demonstrated that all remedial actions at the site provided for a remediation that met all NMOCD remedial standards, and any remaining constituents are below the NMOCD Remediation Action Limits.

Spur Energy Partners LLC
Aikman SWD State #001
Unit N, Section 27, Township 19 South, Range 25 East
NMOCD Reference # nAB1806541396, NRM2004958378, nAPP2114556912, nAPP2127753131

Soil Management Plan	
Soil Objectives	**Approach Actions**
General Soil Plan	Remove impacted soils and dispose of them at an O&G exempt waste facility.
Reclamation Response Objectives	Remove all soils impacted above the NMOCD Remediation Action Limits for areas with a high karst designation.
Remediation Response Objectives	Remove all soils impacted above the NMOCD Remediation Action Limits for areas with a high karst designation.
Soil Management	Impacted soils were excavated and stockpiled for disposal
Depth of Remediation Confirmation Soil Map – (Figure 3 in Appendix A)	Total depth of remediation did not exceed 8 ft. bgs.
Disposal Facility Waste Manifest – (Appendix E)	Lea Land Waste Disposal Facility.
Quantity Disposed Waste Manifest – (Appendix E)	3,600 cu. Yds.

APPENDIX A – EXHIBITS



Project No.	AR207018
Scale:	As Shown
Source:	Google Earth
Image Date:	01/31/2020

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

Figure 1 – Topographic Map

Aikman SWD
32.626115°, -104.474694°
Eddy County, New Mexico

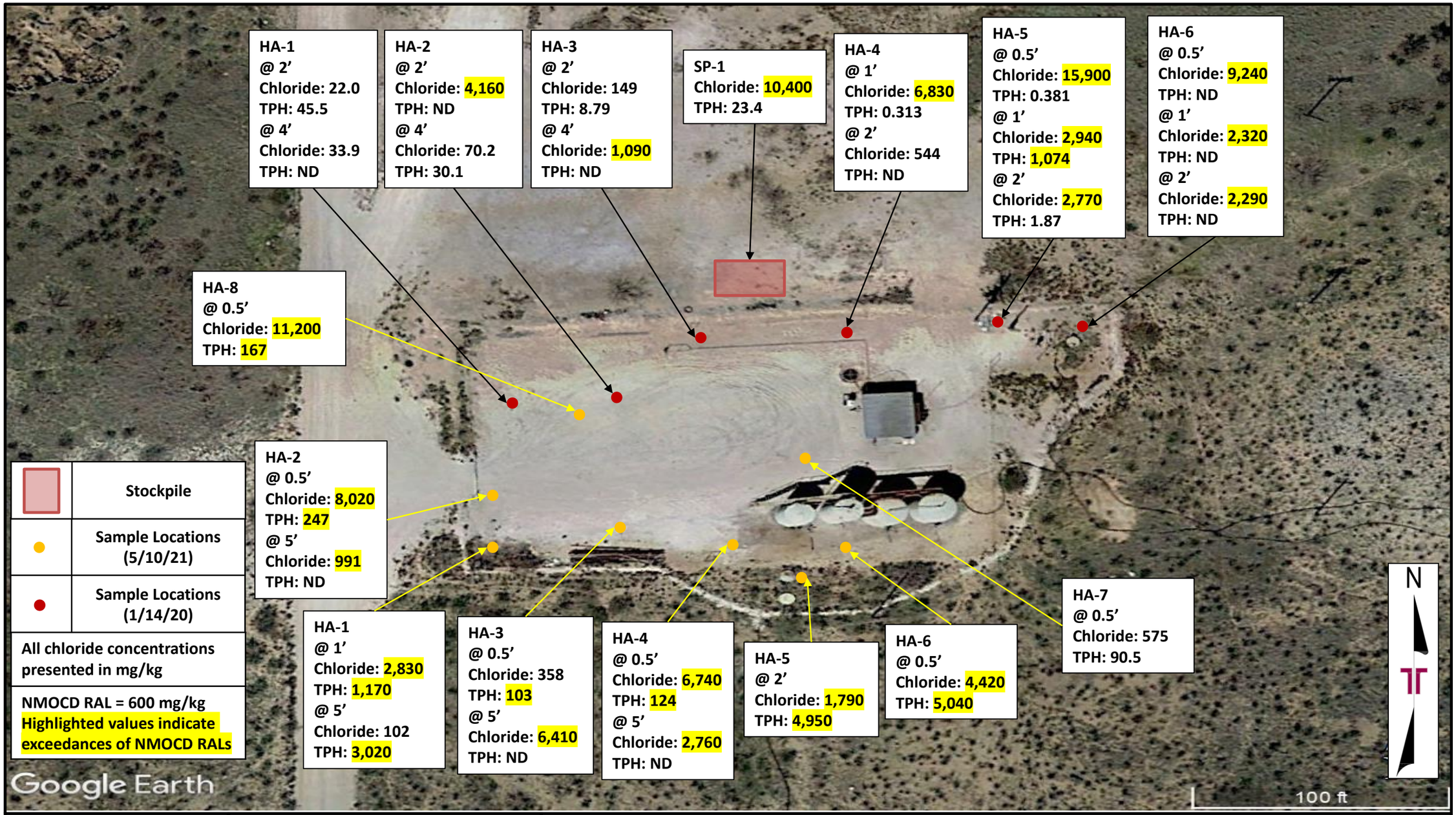


Project No.	AR207018
Scale:	As Shown
Source:	Google Earth
Image Date:	01/31/2020

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

Figure 2 – Site Map

Aikman SWD
32.626115°, -104.474694°
Eddy County, New Mexico

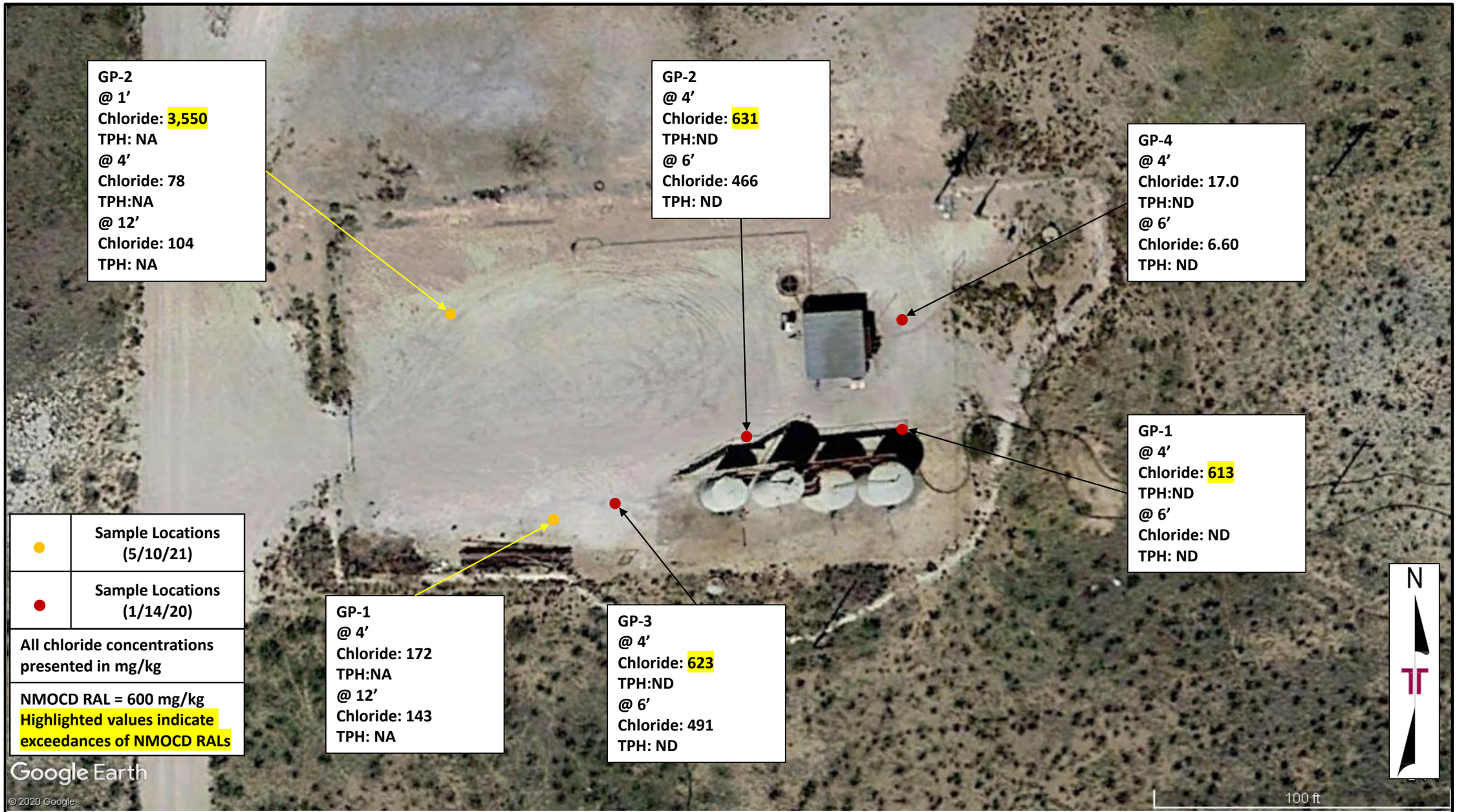


Project No.	AR207018
Scale:	As Shown
Source:	Google Earth
Image Date:	01/31/2020

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Figure 3 – Initial Site Investigation Map

Aikman SWD
32.626115°, -104.474694°
Eddy County, New Mexico



Project No.	AR207018
Scale:	As Shown
Source:	Google Earth
Image Date:	01/31/2020

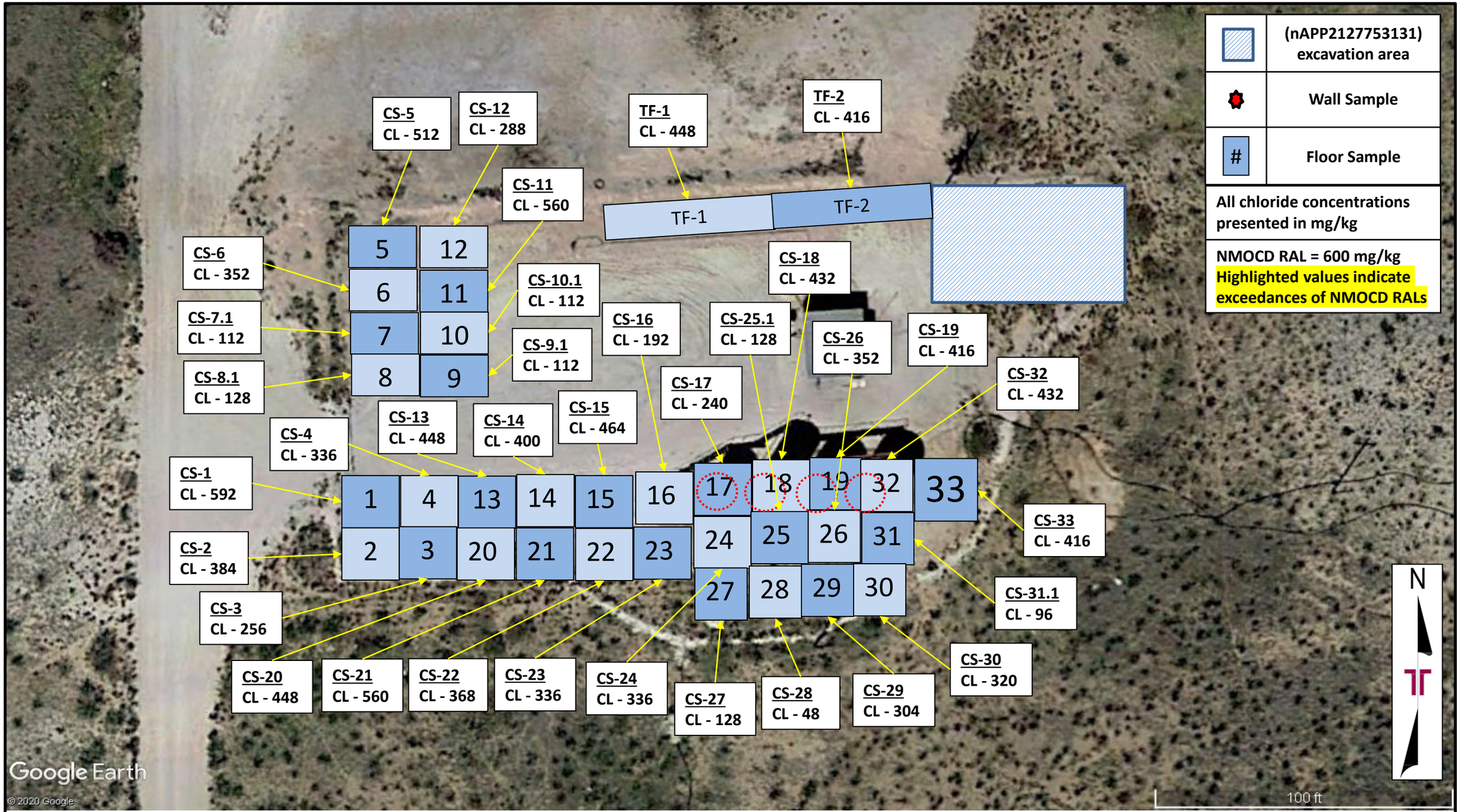
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Consulting Engineers & Scientists
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Figure 4 – Supplemental Site Investigation Map

Aikman SWD

32.626115°, -104.474694°

Eddy County, New Mexico

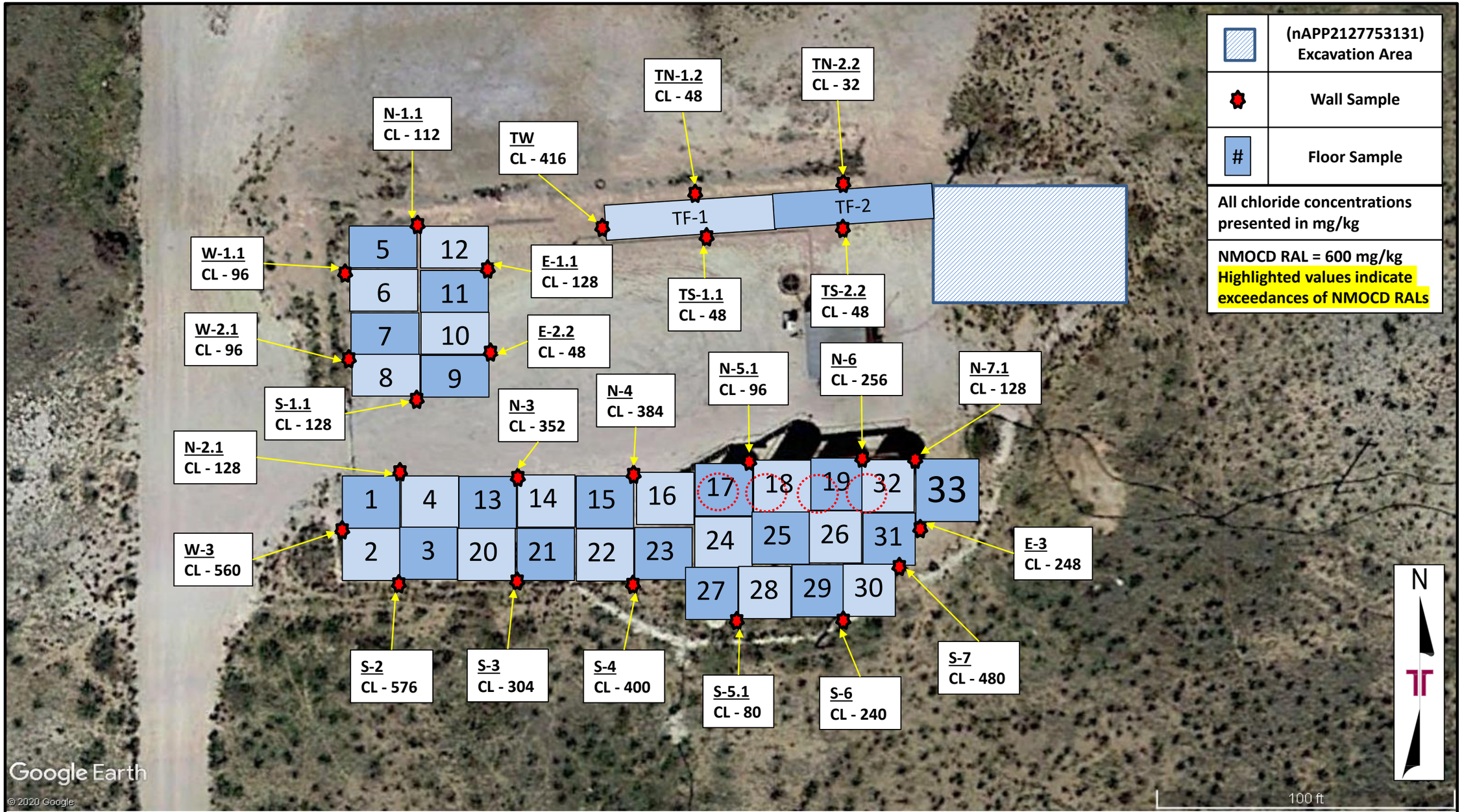


Project No.	AR207018
Scale:	As Shown
Source:	Google Earth
Image Date:	05/31/2022

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Figure 5 – Confirmation Sampling Map (Floors)

Aikman SWD
32.626115°, -104.474694°
Eddy County, New Mexico

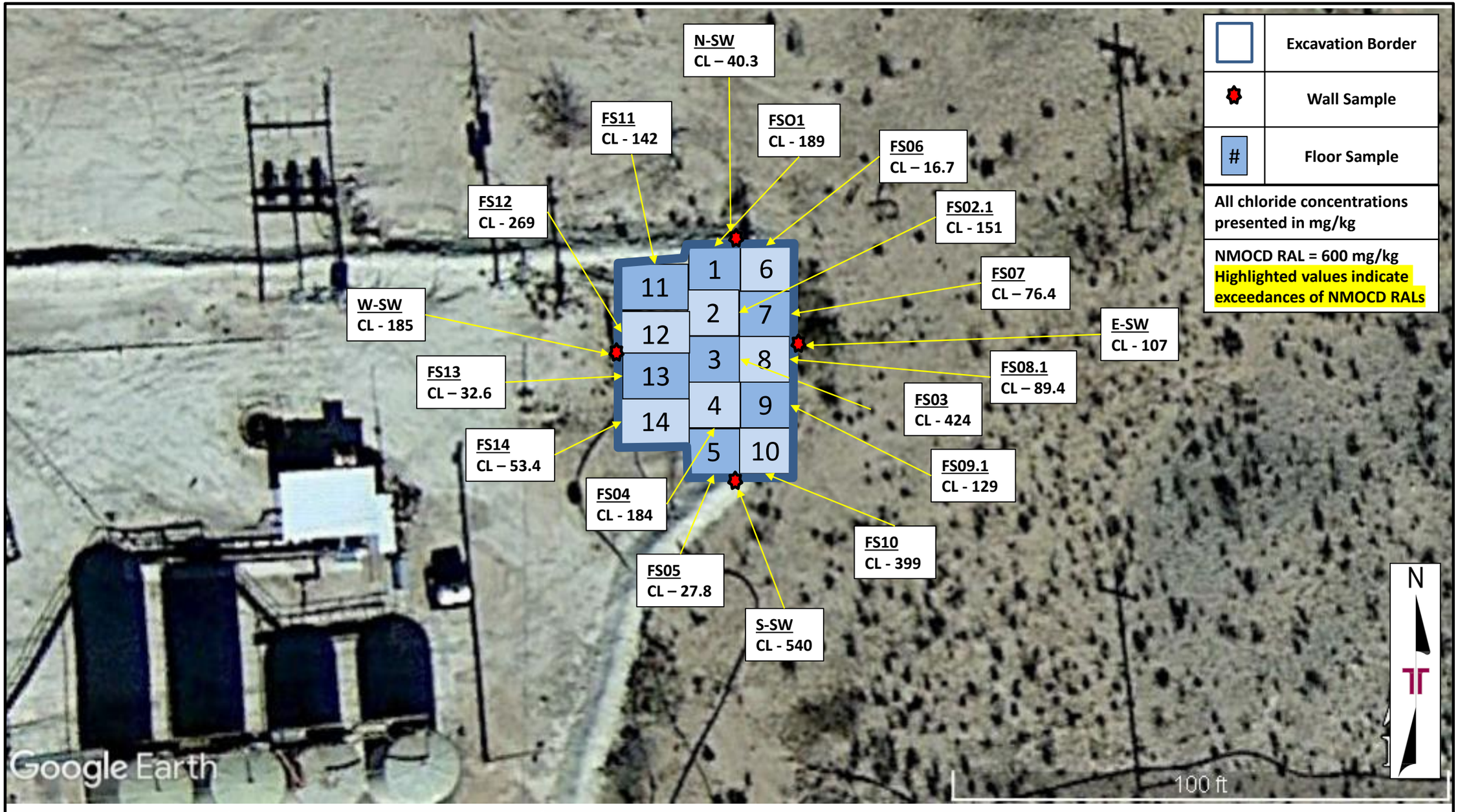


Project No.	AR207018
Scale:	As Shown
Source:	Google Earth
Image Date:	05/31/2022

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Figure 6 – Confirmation Sampling Map (Walls)

Aikman SWD
32.626115°, -104.474694°
Eddy County, New Mexico



Project No.	AR207018
Scale:	As Shown
Source:	Google Earth
Image Date:	05/31/2022

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Figure 7 – Confirmation Sampling Map (nAPP2127753131)

Aikman SWD
32.626115°, -104.474694°
Eddy County, New Mexico

Figure 8 - NMOSE POD Location Map



6/18/2020 4:39:05 PM

OSE District Boundary

GIS WATERS PODs

- Active
- Pending

Conveyances

- Acequia
- Acequia Tunnel
- Canal
- Channel
- Closed Drain
- Community Ditch
- Connector
- Culvert
- Ditch
- Diversion Weir
- Drain
- Feeder
- Interior Drain
- Lateral
- Pipe
- Wasteway
- Other
- Unknown

1:18,056

0 0.17 0.35 0.7 mi

0 0.3 0.6 1.2 km

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

Released to Imaging: 8/29/2023 1:29:02 PM

The New Mexico Office of the State Engineer (OSE) provides this geographic data and any associated metadata "as is" without warranty of any kind, including but not limited to its completeness, fitness for a particular use, or accuracy of its content, positional or otherwise. It is the sole responsibility of the user to



Low Karst
Medium Karst
High Karst

N

Project No.	AR207018
Scale:	As Shown
Source:	Google Earth
Date:	06/04/2021

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Consulting Engineers & Scientists
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Figure 9 – Karst Location Map

Aikman SWD
32.626115°, -104.474694°
Eddy County, New Mexico

APPENDIX B – TABLES, PROCEDURES, AND FIGURES

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

**Or other methods approved by the division*

***Numerical limits or natural background level, whichever is greater*

****This applies to releases of produced water or other fluids, which may contain chloride*

TABLE 2
SOIL SAMPLE ANALYTICAL RESULTS - BTEX[1], Chloride[2], and TPH[3]
Aikman SWD
Terracon Project No. AR207018

Sample I.D.	Sample Depth (ft. bgs)	Sample Type	Sample Date	BTEX (mg/kg)	Chloride (mg/kg)	TPH (8015M) (mg/kg)			
						GRO	DRO	ORO	TOTAL
Release Margin Samples (Off Pad)									
HA-1	1.5' - 2'	Grab	01/14/20	Benzene - ND Toluene - ND Ethylbenzene - ND Total Xylenes - ND Total BTEX - ND	22	ND	45.5	ND	45.5
	3.5' - 4'	Grab	01/14/20	Benzene - ND Toluene - ND Ethylbenzene - ND Total Xylenes - ND Total BTEX - ND	33.9	ND	ND	ND	ND
HA-2	1.5' - 2'	Grab	01/14/20	Benzene - ND Toluene - ND Ethylbenzene - ND Total Xylenes - ND Total BTEX - ND	**4,160**	ND	ND	ND	ND
	3.5' - 4'	Grab	01/14/20	Benzene - ND Toluene - ND Ethylbenzene - ND Total Xylenes - ND Total BTEX - ND	70.2	ND	30.1	ND	30.1
HA-3	1.5' - 2'	Grab	01/14/20	Benzene - ND Toluene - ND Ethylbenzene - ND Total Xylenes - ND Total BTEX - ND	149	ND	8.79	ND	8.79
	3.5' - 4'	Grab	01/14/20	Benzene - ND Toluene - ND Ethylbenzene - ND Total Xylenes - ND Total BTEX - ND	**1,090**	ND	ND	ND	ND
HA-4	1.5' - 2'	Grab	01/14/20	Benzene - ND Toluene - ND Ethylbenzene - ND Total Xylenes - ND Total BTEX - ND	**6,830**	0.313	ND	ND	0.313
	3.5' - 4'	Grab	01/14/20	Benzene - ND Toluene - ND Ethylbenzene - ND Total Xylenes - ND Total BTEX - ND	544	ND	ND	ND	ND
SP-1	N/A	Comp	01/14/20	Benzene - ND Toluene - ND Ethylbenzene - ND Total Xylenes - ND Total BTEX - ND	**10,400**	0.398	22.7	ND	22.7
NMOCD Reclamation and Remediation Standards[4] (Applicable for Soils within a high karst area)				**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/MRO)
4. New Mexico Administration Code (NMAC) Restoration, Reclamation, and Re-vegetation (19.15.29.13) New Mexico Administration Code (NMAC) – D (Reclamation of areas no longer in use) for soils extending to 4 ft. bgs
5. New Mexico Oil Conservation Division (NMOCD) Remediation and Delineation Standards are proposed in 19.15.29.12 NMAC - N, 8/14/2018

< = Constituent not detected above the indicated laboratory SDL

NA = Not Analyzed

ND = Non Detected

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

TABLE 2
SOIL SAMPLE ANALYTICAL RESULTS - BTEX[1], Chloride[2], and TPH[3]
Aikman SWD
Terracon Project No. AR207018

Sample I.D.	Sample Depth (ft. bgs)	Sample Type	Sample Date	BTEX (mg/kg)	Chloride (mg/kg)	TPH (8015M) (mg/kg)			
						GRO	DRO	ORO	TOTAL
Release Margin Samples (On Pad)									
HA-5	0' - 0.5'	Grab	01/23/20	Benzene - ND Toluene - ND Ethylbenzene - ND Total Xylenes - ND Total BTEX - ND	**15,900**	0.381	ND	ND	0.381
	0.5' - 1'	Grab	01/23/20	Benzene - 0.127 Toluene - ND Ethylbenzene - ND Total Xylenes - ND Total BTEX - 0.127	**2,940**	14.1	1,060	35	**1,109.1**
	1.5' - 2'	Grab	01/23/20	Benzene - ND Toluene - ND Ethylbenzene - ND Total Xylenes - ND Total BTEX - ND	**2,770**	1.87	ND	ND	1.87
HA-6	0' - 0.5'	Grab	01/23/20	Benzene - ND Toluene - ND Ethylbenzene - ND Total Xylenes - ND Total BTEX - ND	**9,240**	3.27	ND	ND	3.27
	0.5' - 1'	Grab	01/23/90	Benzene - ND Toluene - ND Ethylbenzene - ND Total Xylenes - ND Total BTEX - ND	**2,320**	ND	ND	ND	ND
	1.5' - 2'	Grab	01/23/20	Benzene - ND Toluene - ND Ethylbenzene - ND Total Xylenes - ND Total BTEX - ND	**2,290**	ND	ND	ND	ND
Confirmation Samples (On Pad)									
SW-1	0.5 - 1	Comp	02/10/20	Benzene - <0.00888 Toluene - <0.00460 Ethylbenzene - <0.00605 Total Xylenes - <0.00670 Total BTEX - <0.00460	**3,580**	2.79	13.4	<7.56	15.83
WW-1	0.5 - 1	Comp	02/10/20	Benzene - <0.0179 Toluene - <0.00927 Ethylbenzene - <0.0122 Total Xylenes - <0.0135 Total BTEX - <0.00927	**4,230**	3.46	67.6	<7.50	70.52
NWT-1	0.5 - 1	Comp	02/10/20	Benzene - <0.00888 Toluene - 0.0177 Ethylbenzene - <0.00605 Total Xylenes - <0.00670 Total BTEX - 0.0177	**9,510**	0.752	74.9	<7.53	75.65
NMOCD Reclamation and Remediation Standards[4] (Applicable for Soils within a high karst area)				**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/MRO)
4. New Mexico Administration Code (NMAC) Restoration, Reclamation, and Re-vegetation (19.15.29.13) New Mexico Administration Code (NMAC) – D (Reclamation of areas no longer in use) for soils extending to 4 ft. bgs
5. New Mexico Oil Conservation Division (NMOCD) Remediation and Delineation Standards are proposed in 19.15.29.12 NMAC - N, 8/14/2018

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

TABLE 2
SOIL SAMPLE ANALYTICAL RESULTS - BTEX[1], Chloride[2], and TPH[3]
Aikman SWD
Terracon Project No. AR207018

Sample I.D.	Sample Depth (ft. bgs)	Sample Type	Sample Date	BTEX (mg/kg)	Chloride (mg/kg)	TPH (8015M) (mg/kg)			
						GRO	DRO	ORO	TOTAL
Confirmation Samples (On Pad)									
NW-1	0.5 - 1	Comp	02/10/20	Benzene - <0.0175 Toluene - <0.00903 Ethylbenzene - <0.0119 Total Xylenes - <0.0132 Total BTEX - <0.00903	**8,520**	1.07	52.8	<7.52	53.87
EW-1	0.5 - 1	Comp	02/10/20	Benzene - <0.00783 Toluene - <0.00406 Ethylbenzene - <0.00534 Total Xylenes - <0.00591 Total BTEX - <0.00406	**5,520**	2.32	16.7	<7.50	19.02
SWT-1	0.5 - 1	Comp	02/10/20	Benzene - <0.00890 Toluene - <0.00461 Ethylbenzene - <0.00606 Total Xylenes - <0.00671 Total BTEX - <0.00461	**11,000**	0.780	21.1	<7.53	21.88
SWT-1.1	0.5 - 1	Comp	02/26/20	Benzene - <0.000207 Toluene - <0.00100 Ethylbenzene - <0.000336 Total Xylenes - <0.000438 Total BTEX - <0.000207	**2,410**	<0.259	<7.56	<7.56	<0.259
NEW-1	0.5 - 1	Comp	02/10/20	Benzene - <0.00789 Toluene - <0.00408 Ethylbenzene - <0.00538 Total Xylenes - <0.00595 Total BTEX - <0.00408	**1,580**	0.408	<7.53	<7.53	0.408
SEW-1	0.5 - 1	Comp	02/10/20	Benzene - <0.0178 Toluene - <0.00921 Ethylbenzene - <0.0121 Total Xylenes - <0.0134 Total BTEX - <0.00921	**5,820**	0.728	27.8	<7.44	28.528
NWF-1	1.5 - 2	Comp	02/10/20	Benzene - <0.00161 Toluene - <0.00836 Ethylbenzene - <0.0110 Total Xylenes - <0.0122 Total BTEX - <0.00836	**7,320**	0.996	27.8	<7.53	28.796
SWF-1	1.5 - 2	Comp	02/10/20	Benzene - <0.00181 Toluene - <0.00936 Ethylbenzene - <0.00123 Total Xylenes - <0.00136 Total BTEX - <0.00936	**6,710**	0.936	33.4	<7.45	34.336
NEF-1	1.5 - 2	Comp	02/10/20	Benzene - <0.00157 Toluene - <0.00814 Ethylbenzene - <0.0107 Total Xylenes - <0.0119 Total BTEX - <0.00814	**6,690**	1.21	39.0	<7.45	40.21
SEF-1	1.5 - 2	Comp	02/10/20	Benzene - <0.0164 Toluene - <0.00849 Ethylbenzene - <0.0112 Total Xylenes - <0.0124 Total BTEX - <0.00849	**7,260**	1.40	18.7	<7.47	19.47
WTF-1	1.5 - 2	Comp	02/10/20	Benzene - <0.00878 Toluene - <0.00454 Ethylbenzene - <0.00598 Total Xylenes - <0.00662 Total BTEX - <0.00454	**3,660**	0.612	19.6	<7.51	20.212
ETF-1	1.5 - 2	Comp	02/10/20	Benzene - <0.00831 Toluene - <0.00430 Ethylbenzene - <0.00566 Total Xylenes - <0.00627 Total BTEX - <0.00430	**5,100**	0.494	<7.48	<7.48	0.494
NMOCD Reclamation and Remediation Standards[4] **(Applicable for Soils within a high karst area)**				**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/MRO)
4. New Mexico Administration Code (NMAC) Restoration, Reclamation, and Re-vegetation (19.15.29.13) New Mexico Administration Code (NMAC) – D (Reclamation of areas no longer in use) for soils extending to 4 ft. bgs
5. New Mexico Oil Conservation Division (NMOCD) Remediation and Delineation Standards are proposed in 19.15.29.12 NMAC - N, 8/14/2018

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

TABLE 2
SOIL SAMPLE ANALYTICAL RESULTS - BTEX[1], Chloride[2], and TPH[3]
Aikman SWD
Terracon Project No. AR207018

Sample I.D.	Sample Depth (ft. bgs)	Sample Type	Sample Date	BTEX (mg/kg)	Chloride (mg/kg)	TPH (8015M) (mg/kg)			
						GRO	DRO	ORO	TOTAL
Geoprobe Investigation (On Pad)									
GP-1	3' - 4'	Grab	12/21/20	Benzene - ND Toluene - ND Ethylbenzene - ND Total Xylenes - 0.00693 Total BTEX - 0.00693	**613**	ND	ND	ND	ND
GP-1	5' - 6'	Grab	12/21/20	Benzene - ND Toluene - ND Ethylbenzene - ND Total Xylenes - 0.00708 Total BTEX - 0.00708	ND	ND	ND	ND	ND
GP-2	3' - 4'	Grab	12/21/20	Benzene - ND Toluene - ND Ethylbenzene - ND Total Xylenes - ND Total BTEX - ND	**631**	ND	ND	ND	ND
GP-2	5' - 6'	Grab	12/21/20	Benzene - ND Toluene - ND Ethylbenzene - ND Total Xylenes - ND Total BTEX - ND	466	ND	ND	ND	ND
GP-3	3' - 4'	Grab	12/21/20	Benzene - ND Toluene - ND Ethylbenzene - ND Total Xylenes - ND Total BTEX - ND	**623**	ND	ND	ND	ND
GP-3	5' - 6'	Grab	12/21/20	Benzene - ND Toluene - ND Ethylbenzene - ND Total Xylenes - ND Total BTEX - ND	491	ND	ND	ND	ND
GP-4	3' - 4'	Grab	12/21/20	Benzene - ND Toluene - ND Ethylbenzene - ND Total Xylenes - ND Total BTEX - ND	17.0	ND	ND	ND	ND
GP-4	5' - 6'	Grab	12/21/20	Benzene - ND Toluene - ND Ethylbenzene - ND Total Xylenes - ND Total BTEX - ND	6.60	ND	ND	ND	ND
Additional Geoprobe Investigation (On Pad)									
GP-1	4' - 5'	Grab	05/21/21	Total BTEX - NA	172	NA	NA	NA	NA
	5' - 6'	Grab	05/21/21	Total BTEX - NA	276	NA	NA	NA	NA
	6' - 7'	Grab	05/21/21	Total BTEX - NA	490	NA	NA	NA	NA
	7' - 8'	Grab	05/21/21	Total BTEX - NA	528	NA	NA	NA	NA
	8' - 9'	Grab	05/21/21	Total BTEX - NA	383	NA	NA	NA	NA
	9' - 10'	Grab	05/21/21	Total BTEX - NA	225	NA	NA	NA	NA
	10' - 11'	Grab	05/21/21	Total BTEX - NA	228	NA	NA	NA	NA
	11' - 12'	Grab	05/21/21	Total BTEX - NA	143	NA	NA	NA	NA
GP-2	0' - 1'	Grab	05/21/21	Total BTEX - NA	**3,550**	NA	NA	NA	NA
	1' - 2'	Grab	05/21/21	Total BTEX - NA	252	NA	NA	NA	NA
	2' -3'	Grab	05/21/21	Total BTEX - NA	34	NA	NA	NA	NA
	3' - 4'	Grab	05/21/21	Total BTEX - NA	40.9	NA	NA	NA	NA
	4' - 5'	Grab	05/21/21	Total BTEX - NA	78	NA	NA	NA	NA
	5' - 6'	Grab	05/21/21	Total BTEX - NA	52.2	NA	NA	NA	NA
	6' - 7'	Grab	05/21/21	Total BTEX - NA	58	NA	NA	NA	NA
	7' - 8'	Grab	05/21/21	Total BTEX - NA	60.8	NA	NA	NA	NA
	8' - 9'	Grab	05/21/21	Total BTEX - NA	75	NA	NA	NA	NA
	9' - 10'	Grab	05/21/21	Total BTEX - NA	64.4	NA	NA	NA	NA
	10' - 11'	Grab	05/21/21	Total BTEX - NA	94.4	NA	NA	NA	NA
	11' - 12'	Grab	05/21/21	Total BTEX - NA	104	NA	NA	NA	NA
NMOCD Reclamation and Remediation Standards[4] **(Applicable for Soils within a high karst area)**				**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/MRO)
4. New Mexico Administration Code (NMAC) Restoration, Reclamation, and Re-vegetation (19.15.29.13) New Mexico Administration Code (NMAC) – D (Reclamation of areas no longer in use) for soils extending to 4 ft. bgs
5. New Mexico Oil Conservation Division (NMOCD) Remediation and Delineation Standards are proposed in 19.15.29.12 NMAC - N, 8/14/2018

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

TABLE 2
SOIL SAMPLE ANALYTICAL RESULTS - BTEX[1], Chloride[2], and TPH[3]
Aikman SWD
Terracon Project No. AR207018

Sample I.D.	Sample Depth (ft. bgs)	Sample Type	Sample Date	BTEX (mg/kg)	Chloride (mg/kg)	TPH (8015M) (mg/kg)			
						GRO	DRO	ORO	TOTAL
(04/27/2021) Release Margin Samples (On Pad)									
HA-1	0-0.5'	Grab	05/10/21	Benzene - ND Total BTEX - ND	315	ND	ND	ND	ND
	0.5-1'	Grab	05/10/21	Benzene - ND Total BTEX - 0.0385	**2830**	ND	1170	ND	**1170**
	1.5-2'	Grab	05/10/21	Benzene - 0.0796 Total BTEX - 4.78	189	246	1,790	ND	**2040**
	3.5-4'	Grab	05/10/21	Benzene - 0.221 Total BTEX - 10.5	256	389	2,050	ND	**2,440**
	4.5-5'	Grab	05/10/21	Benzene - 0.266 Total BTEX - 42.3	102	722	2,300	ND	**3,020**
HA-2	0-0.5'	Grab	05/10/21	Benzene - 0.0617 Total BTEX - 1.73	**8,020**	ND	247	ND	**247**
	0.5-1'	Grab	05/10/21	Benzene - ND Total BTEX - 0.101	**10,300**	ND	181	ND	**181**
	1.5 - 2'	Grab	05/10/21	Benzene - ND Total BTEX - ND	**3,300**	606	ND	ND	**606**
	3.5 - 4	Grab	05/10/21	Benzene - 0.00202 Total BTEX - 0.00202	**918**	ND	ND	ND	ND
	4.5-5'	Grab	05/10/21	Benzene - ND Total BTEX - ND	**991**	ND	ND	ND	ND
HA-3	0-0.5'	Grab	05/10/21	Benzene - ND Total BTEX - ND	358	ND	103	ND	**103**
	0.5-1'	Grab	05/10/21	Benzene - 0.618 Total BTEX - 1.31	265	ND	457	ND	**457**
	1.5 - 2'	Grab	05/10/21	Benzene - ND Total BTEX - ND	**993**	ND	61.6	ND	61.6
	3.5 - 4	Grab	05/10/21	Benzene - ND Total BTEX - ND	**8,940**	ND	ND	ND	ND
	4.5-5'	Grab	05/10/21	Benzene - ND Total BTEX - ND	**6,410**	ND	ND	ND	ND
HA-4	0-0.5'	Grab	05/10/21	Benzene - ND Total BTEX - ND	**6740**	ND	124	ND	**124**
	0.5-1'	Grab	05/10/21	Benzene - ND Total BTEX - ND	**1390**	ND	ND	ND	ND
	1.5 - 2'	Grab	05/10/21	Benzene - ND Total BTEX - ND	**8,700**	ND	ND	ND	ND
	3.5 - 4'	Grab	05/10/21	Benzene - ND Total BTEX - ND	**3,720**	ND	ND	ND	ND
	4.5-5'	Grab	05/10/21	Benzene - ND Total BTEX - ND	**2,760**	ND	ND	ND	ND
NMOCD Reclamation Standards[4] **(Applicable for Soils from the Surface to 4 ft. Below Grade Surface)**				**Benzene - 10** **Toluene - N/A** **Ethylbenzene - N/A** **Total Xylenes - N/A** **Total BTEX - 50**	**600**	**N/A**			**100**

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

< = Constituent not detected above the indicated laboratory SDL

NA = Not Analyzed

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

TABLE 2
SOIL SAMPLE ANALYTICAL RESULTS - BTEX[1], Chloride[2], and TPH[3]
Aikman SWD
Terracon Project No. AR207018

Sample I.D.	Sample Depth (ft. bgs)	Sample Type	Sample Date	BTEX (mg/kg)	Chloride (mg/kg)	TPH (8015M) (mg/kg)			
						GRO	DRO	ORO	TOTAL
(04/27/2021) Release Margin Samples (On Pad)									
HA-5	0 - 0.5'	Grab	05/10/21	Benzene - ND Toluene - 1.41 Ethylbenzene - 7.79 Total Xylenes - 19 Total BTEX - 28.2	**1,790**	203	4,750	ND	**4,950**
HA-6	0 - 0.5'	Grab	05/10/21	Benzene - ND Toluene - 0.173 Ethylbenzene - 0.124 Total Xylenes - 0.218 Total BTEX - 0.515	**4,420**	52.7	4,990	ND	**5,040**
HA-7	0 - 0.5'	Grab	05/10/21	Benzene - ND Toluene - ND Ethylbenzene - ND Total Xylenes - ND Total BTEX - ND	575	ND	90.5	ND	90.5
HA-8	0 - 0.5'	Grab	05/10/21	Benzene - ND Toluene - ND Ethylbenzene - ND Total Xylenes - ND Total BTEX - ND	**11,200**	ND	167	ND	**167**
NMOCD Reclamation Standards[4] **(Applicable for Soils from the Surface to 4 ft. Below Grade Surface)**				**Benzene - 10** **Toluene - N/A** **Ethylbenzene - N/A** **Total Xylenes - N/A** **Total BTEX - 50**	**600**	**N/A**			**100**

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

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

TABLE 2
SOIL SAMPLE ANALYTICAL RESULTS - BTEX[1], Chloride[2], and TPH[3]
Aikman SWD
Terracon Project No. AR207018

Sample I.D.	Sample Depth (ft. bgs)	Sample Type	Sample Date	BTEX (mg/kg)	Chloride (mg/kg)	TPH (8015M) (mg/kg)			
						GRO	DRO	ORO	TOTAL
(06/29/2022) Confirmation Samples									
CS-1	5'-6'	Composite	06/29/22	Benzene - ND Total BTEX - ND	592	ND	ND	ND	ND
CS-2	5'-6'	Composite	06/29/22	Benzene - ND Total BTEX - ND	384	ND	ND	ND	ND
CS-3	5'-6'	Composite	06/29/22	Benzene - ND Total BTEX - ND	256	ND	ND	ND	ND
CS-4	5'-6'	Composite	06/29/22	Benzene - ND Total BTEX - ND	336	ND	ND	ND	ND
CS-5	5'-6'	Composite	06/29/22	Benzene - ND Total BTEX - ND	512	ND	ND	ND	ND
CS-6	5'-6'	Composite	06/29/22	Benzene - ND Total BTEX - ND	352	ND	ND	ND	ND
CS-7	5'-6'	Composite	06/29/22	Benzene - ND Total BTEX - ND	**608**	ND	69.5	ND	69.5
CS-7.1	6'-7'	Composite	07/20/22	Benzene - ND Total BTEX - ND	112	ND	ND	ND	ND
CS-8	5'-6'	Composite	06/29/22	Benzene - ND Total BTEX - ND	**608**	ND	ND	ND	ND
CS-8.1	6'-7'	Composite	07/20/22	Benzene - ND Total BTEX - ND	128	ND	ND	ND	ND
CS-9	5'-6'	Composite	06/29/22	Benzene - ND Total BTEX - ND	**880**	ND	ND	ND	ND
CS-9.1	6'-7'	Composite	07/20/22	Benzene - ND Total BTEX - ND	112	ND	ND	ND	ND
CS-10	5'-6'	Composite	06/29/22	Benzene - ND Total BTEX - ND	**1310**	ND	ND	ND	ND
CS-10.1	6'-7'	Composite	07/20/22	Benzene - ND Total BTEX - ND	112	ND	ND	ND	ND
CS-11	5'-6'	Composite	06/29/22	Benzene - ND Total BTEX - ND	560	ND	ND	ND	ND
CS-12	5'-6'	Composite	06/29/22	Benzene - ND Total BTEX - ND	288	ND	ND	ND	ND
CS-13	5'-6'	Composite	06/29/22	Benzene - ND Total BTEX - ND	448	ND	ND	ND	ND
CS-14	5'-6'	Composite	06/29/22	Benzene - ND Total BTEX - ND	400	ND	ND	ND	ND
CS-15	5'-6'	Composite	06/29/22	Benzene - ND Total BTEX - ND	464	ND	ND	ND	ND
CS-16	5'-6'	Composite	06/29/22	Benzene - ND Total BTEX - ND	192	ND	35.2	ND	35.2
CS-17	5'-6'	Composite	06/29/22	Benzene - ND Total BTEX - ND	240	ND	59.9	ND	59.9
CS-18	5'-6'	Composite	06/29/22	Benzene - ND Total BTEX - ND	432	ND	ND	ND	ND
CS-19	5'-6'	Composite	06/29/22	Benzene - ND Total BTEX - ND	416	ND	ND	ND	ND
CS-20	5'-6'	Composite	06/29/22	Benzene - ND Total BTEX - ND	448	ND	ND	ND	ND
CS-21	5'-6'	Composite	06/29/22	Benzene - ND Total BTEX - ND	560	ND	46.1	ND	46.1
CS-22	5'-6'	Composite	06/29/22	Benzene - ND Total BTEX - ND	368	ND	ND	ND	ND
CS-23	5'-6'	Composite	06/29/22	Benzene - ND Total BTEX - ND	336	ND	ND	ND	ND
CS-24	5'-6'	Composite	06/29/22	Benzene - ND Total BTEX - ND	336	ND	ND	ND	ND
CS-25	5'-6'	Composite	06/29/22	Benzene - ND Total BTEX - ND	**608**	ND	ND	ND	ND
CS-25.1	6'-7'	Composite	07/20/22	Benzene - ND Total BTEX - ND	128	ND	ND	ND	ND
CS-26	5'-6'	Composite	06/29/22	Benzene - ND Total BTEX - ND	352	ND	ND	ND	ND
CS-27	5'-6'	Composite	06/29/22	Benzene - ND Total BTEX - ND	128	ND	ND	ND	ND
CS-28	5'-6'	Composite	06/29/22	Benzene - ND Total BTEX - ND	48	ND	ND	ND	ND
CS-29	5'-6'	Composite	06/29/22	Benzene - ND Total BTEX - ND	304	ND	ND	ND	ND
CS-30	5'-6'	Composite	06/29/22	Benzene - ND Total BTEX - ND	320	ND	ND	ND	ND
CS-31	5'-6'	Composite	06/29/22	Benzene - ND Total BTEX - ND	**1060**	ND	ND	ND	ND
CS-31.1	6'-7'	Composite	07/20/22	Benzene - ND Total BTEX - ND	96	ND	ND	ND	ND
CS-32	5'-6'	Composite	06/29/22	Benzene - ND Total BTEX - ND	432	ND	ND	ND	ND
CS-33	5'-6'	Composite	06/29/22	Benzene - ND Total BTEX - ND	416	ND	44.1	ND	44.1
N-1	2'-3'	Composite	06/29/22	Benzene - ND Total BTEX - ND	**944**	ND	35.1	10.6	45.7
N-1.1	2'-3'	Composite	07/20/22	Benzene - ND Total BTEX - ND	112	ND	ND	ND	ND
NMOCD Reclamation Standards[4] **(Applicable for Soils from the Surface to 4 ft. Below Grade Surface)**				**Benzene - 10** **Toluene - N/A** **Ethylbenzene - N/A** **Total Xylenes - N/A** **Total BTEX - 50**	**600**	**N/A**			**100**

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

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

TABLE 2
SOIL SAMPLE ANALYTICAL RESULTS - BTEX[1], Chloride[2], and TPH[3]
Aikman SWD
Terracon Project No. AR207018

Sample I.D.	Sample Depth (ft. bgs)	Sample Type	Sample Date	BTEX (mg/kg)	Chloride (mg/kg)	TPH (8015M) (mg/kg)			
						GRO	DRO	ORO	TOTAL
(06/29/2022) Confirmation Samples									
N-2	2'-3'	Composite	06/29/22	Benzene - ND Total BTEX - ND	**640**	ND	105	25	**130**
N-2.1	2'-3'	Composite	07/20/22	Benzene - ND Total BTEX - ND	128	ND	ND	ND	ND
N-3	2'-3'	Composite	06/29/22	Benzene - ND Total BTEX - ND	352	ND	ND	ND	ND
N-4	2'-3'	Composite	06/29/22	Benzene - ND Total BTEX - ND	384	ND	26.3	ND	26.3
N-5	2'-3'	Composite	06/29/22	Benzene - ND Total BTEX - ND	480	ND	372	104	**476**
N-5.1	2'-3'	Composite	07/20/22	Benzene - ND Total BTEX - ND	96	ND	ND	ND	ND
N-6	2'-3'	Composite	06/29/22	Benzene - ND Total BTEX - ND	256	ND	ND	ND	ND
N-7	2'-3'	Composite	06/29/22	Benzene - ND Total BTEX - ND	**2680**	ND	82.3	30.8	**113.1**
N-7.1	2'-3'	Composite	07/20/22	Benzene - ND Total BTEX - ND	128	ND	ND	ND	ND
S-1	2'-3'	Composite	06/29/22	Benzene - ND Total BTEX - ND	400	ND	98.2	18.9	**117.1**
S-1.1	2'-3'	Composite	07/20/22	Benzene - ND Total BTEX - ND	128	ND	ND	ND	ND
S-2	2'-3'	Composite	06/29/22	Benzene - ND Total BTEX - ND	576	ND	ND	ND	ND
S-3	2'-3'	Composite	06/29/22	Benzene - ND Total BTEX - ND	304	ND	ND	ND	ND
S-4	2'-3'	Composite	06/29/22	Benzene - ND Total BTEX - ND	400	ND	ND	ND	ND
S-5	2'-3'	Composite	06/29/22	Benzene - ND Total BTEX - ND	**720**	ND	ND	ND	ND
S-5.1	2'-3'	Composite	07/20/22	Benzene - ND Total BTEX - ND	80	ND	ND	ND	ND
S-6	2'-3'	Composite	06/29/22	Benzene - ND Total BTEX - ND	240	ND	ND	ND	ND
S-7	2'-3'	Composite	06/29/22	Benzene - ND Total BTEX - ND	480	ND	ND	ND	ND
W-1	2'-3'	Composite	06/29/22	Benzene - ND Total BTEX - ND	**880**	ND	ND	ND	ND
W-1.1	2'-3'	Composite	07/20/22	Benzene - ND Total BTEX - ND	96	ND	ND	ND	ND
W-2	2'-3'	Composite	06/29/22	Benzene - ND Total BTEX - ND	336	ND	671	215	**886**
W-2.1	2'-3'	Composite	07/20/22	Benzene - ND Total BTEX - ND	96	ND	ND	ND	ND
W-3	2'-3'	Composite	06/29/22	Benzene - ND Total BTEX - ND	560	ND	ND	ND	ND
E-1	2'-3'	Composite	06/29/22	Benzene - ND Total BTEX - ND	**1730**	ND	ND	ND	ND
E-1.1	2'-3'	Composite	07/20/22	Benzene - ND Total BTEX - ND	128	ND	ND	ND	ND
E-2	2'-3'	Composite	06/29/22	Benzene - ND Total BTEX - ND	**608**	ND	ND	ND	ND
E-2.1	2'-3'	Composite	07/20/22	Benzene - ND Total BTEX - ND	48	ND	256	ND	**256**
E-2.2	2'-3'	Composite	11/30/22	Benzene - ND Total BTEX - ND	NA	ND	ND	ND	ND
E-3	2'-3'	Composite	06/29/22	Benzene - ND Total BTEX - ND	240	ND	ND	ND	ND
TN-1	1'-2'	Composite	06/29/22	Benzene - ND Total BTEX - ND	**6400**	ND	ND	ND	ND
TN-1.1	1'-2'	Composite	07/20/22	Benzene - ND Total BTEX - ND	48	ND	285	ND	**285**
TN-1.2	1'-2'	Composite	11/30/22	Benzene - ND Total BTEX - ND	NA	ND	ND	ND	ND
TN-2	1'-2'	Composite	06/29/22	Benzene - ND Total BTEX - ND	**3240**	ND	ND	ND	ND
TN-2.1	1'-2'	Composite	07/20/22	Benzene - 0.056 Total BTEX - 1.03	32	13.4	327	ND	**327**
TN-2.2	1'-2'	Composite	11/30/22	Benzene - ND Total BTEX - ND	NA	ND	ND	ND	ND
TE	1'-2'	Composite	06/29/22	Benzene - ND Total BTEX - ND	**800**	ND	ND	ND	ND
TF-1	2'-3'	Composite	06/29/22	Benzene - ND Total BTEX - ND	448	ND	ND	ND	ND
TF-2	2'-3'	Composite	06/29/22	Benzene - ND Total BTEX - ND	416	ND	ND	ND	ND
TW	1'-2'	Composite	06/29/22	Benzene - ND Total BTEX - ND	416	ND	21.1	ND	21.1
TS-1	1'-2'	Composite	06/29/22	Benzene - ND Total BTEX - ND	**2360**	ND	ND	ND	ND
TS-1.1	1'-2'	Composite	07/20/22	Benzene - ND Total BTEX - ND	48	ND	12.6	ND	12.6
TS-2	1'-2'	Composite	06/29/22	Benzene - ND Total BTEX - ND	**2680**	ND	ND	ND	ND
TS-2.1	1'-2'	Composite	07/20/22	Benzene - ND Total BTEX - 0.661	48	11.6	264	ND	**275**
TS-2.2	1'-2'	Composite	11/30/22	Benzene - ND Total BTEX - ND	NA	ND	ND	ND	ND
NMOCD Reclamation Standards[4] **(Applicable for Soils from the Surface to 4 ft. Below Grade Surface)**				**Benzene - 10** **Toluene - N/A** **Ethylbenzene - N/A** **Total Xylenes - N/A** **Total BTEX - 50**	**600**	**N/A**			**100**

1. BTEX = Benzene, toluene, ethylbenzene, total xylenes analyzed by EPA Method 8021B
2. Chloride = Chloride analyzed by EPA Method 300.
3. TPH = Total petroleum hydrocarbons analyzed by EPA Method 8015M (GRO/DRO/MRO)
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TABLE 2
SOIL SAMPLE ANALYTICAL RESULTS - BTEX[1], Chloride[2], and TPH[3]
Aikman SWD
Terracon Project No. AR207018

Sample I.D.	Sample Depth (ft. bgs)	Sample Type	Sample Date	BTEX (mg/kg)	Chloride (mg/kg)	TPH (8015M) (mg/kg)			
						GRO	DRO	ORO	TOTAL
(nAPP2127753131) Confirmation Samples									
E-SW	2'	Composite	10/10/22	Benzene - ND Total BTEX - ND	107	ND	ND	ND	ND
FS01	2'	Composite	10/10/22	Benzene - ND Total BTEX - 0.00451	189	ND	ND	ND	ND
FS02	2'	Composite	10/10/22	Benzene - ND Total BTEX - ND	**1,290**	ND	ND	ND	ND
FS02.1	2'	Composite	10/28/22	Benzene - ND Total BTEX - ND	151	ND	ND	ND	ND
FS03	2'	Composite	10/10/22	Benzene - ND Total BTEX - ND	424	ND	ND	ND	ND
FS04	2'	Composite	10/10/22	Benzene - ND Total BTEX - ND	184	ND	ND	ND	ND
FS05	2'	Composite	10/10/22	Benzene - ND Total BTEX - ND	27.8	ND	ND	ND	ND
FS06	8'	Composite	10/10/22	Benzene - ND Total BTEX - ND	16.7	ND	ND	ND	ND
FS07	8'	Composite	10/10/22	Benzene - ND Total BTEX - ND	76.4	ND	ND	ND	ND
FS08	8'	Composite	10/10/22	Benzene - ND Total BTEX - ND	**3,120**	ND	ND	ND	ND
FS08.1	8'	Composite	10/28/22	Benzene - ND Total BTEX - ND	89.4	ND	ND	ND	ND
FS09	8'	Composite	10/10/22	Benzene - ND Total BTEX - 0.0912	52.1	ND	104	ND	**104**
FS09.1	8'	Composite	11/23/22	Benzene - ND Total BTEX - ND	129	ND	ND	ND	ND
FS10	8'	Composite	10/10/22	Benzene - ND Total BTEX - ND	399	ND	ND	ND	ND
FS11	8'	Composite	10/10/22	Benzene - ND Total BTEX - ND	142	ND	ND	ND	ND
FS12	8'	Composite	10/10/22	Benzene - 0.0869 Total BTEX - 0.116	269	ND	ND	ND	ND
FS13	8'	Composite	10/10/22	Benzene - ND Total BTEX - ND	32.6	ND	ND	ND	ND
FS14	8'	Composite	10/10/22	Benzene - ND Total BTEX - ND	53.4	ND	ND	ND	ND
N-SW	2'	Composite	10/10/22	Benzene - ND Total BTEX - ND	40.3	ND	ND	ND	ND
S-SW	2'	Composite	10/10/22	Benzene - ND Total BTEX - ND	540	ND	ND	ND	ND
W-SW	2'	Composite	10/10/22	Benzene - ND Total BTEX - ND	185	ND	ND	ND	ND
NMOCD Reclamation Standards[4] (Applicable for Soils from the Surface to 4 ft. Below Grade Surface)				**Benzene - 10 Toluene - N/A Ethylbenzene - N/A Total Xylenes - N/A Total BTEX - 50**	**600**	**N/A**			**100**

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

2. Chloride = Chloride analyzed by EPA Method 300.

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

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

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

APPENDIX C – PHOTOGRAPHIC LOG



PHOTO 1: View of site, facing north. 1/14/2020 / **TIME:** 10:11AM / **GPS:** 32.6261 -104.4748



PHOTO 2: View of site, facing northeast. 1/14/2019 / **TIME:** 10:07AM / **GPS:** 32.6261 -104.4748



PHOTO 3: View of site, facing east. 1/14/2019 / **TIME:** 1:21PM / **GPS:** 32.6261 -104.4748



PHOTO 4: View of stockpile north of site, facing east. 1/14/2019 / **TIME:** 10:16PM / **GPS:** 32.6261 -104.4748



PHOTO 5: View of site near release point, facing east. 1/14/2019 / **TIME:** 1:11PM / **GPS:** 32.6261 -104.4748



PHOTO 6: View of site, facing northeast. 11/22/2019 / **TIME:** 1:07PM / **GPS:** 32.1218 -1104.0725



PHOTO 7: View of site, facing northeast. 11/22/2019 / **TIME:** 1:21PM / **GPS:** 32.1218 -1104.0725



PHOTO 8: View of site, facing northeast. 11/22/2019 / **TIME:** 1:36PM / **GPS:** 32.1221 -1104.0725



PHOTO 9: View of site, facing west. 7/25/2019 / **TIME:** 1:11PM / **GPS:** 32.1217 -1104.0726



PHOTO 10: View of remediation, facing west. 8/21/2019 / **TIME:** 1:07PM / **GPS:** 32.1218 -1104.0725



PHOTO 11: View of HA-1, facing west. 8/21/2019 / **TIME:** 1:21PM / **GPS:** 32.1218 -1104.0725



PHOTO 12: View of site and HA-2, facing south. 8/21/2019 / **TIME:** 1:36PM / **GPS:** 32.1221 -1104.0725



PHOTO 13: View of remediation, facing west. 11/22/2019 / **TIME:** 1:11PM / **GPS:** 32.1217 -1104.0726



PHOTO 14: View of remediation, facing south. 11/22/2019 / **TIME:** 1:07PM / **GPS:** 32.1218 -1104.0725



PHOTO 15: View of base of excavation, facing south. 11/22/2019 / **TIME:** 1:21PM / **GPS:** 32.1218 -1104.0725



PHOTO 16: View of excavation, facing west. 11/22/2019 / **TIME:** 1:36PM / **GPS:** 32.1221 -1104.0725



PHOTO 17: View of base of excavation, facing south. 11/22/2019 / **TIME:** 1:21PM / **GPS:** 32.1218 -1104.0725



PHOTO 18: View of excavation, facing west. 11/22/2019 / **TIME:** 1:36PM / **GPS:** 32.1221 -1104.0725



PHOTO 19: View of new release, facing east.

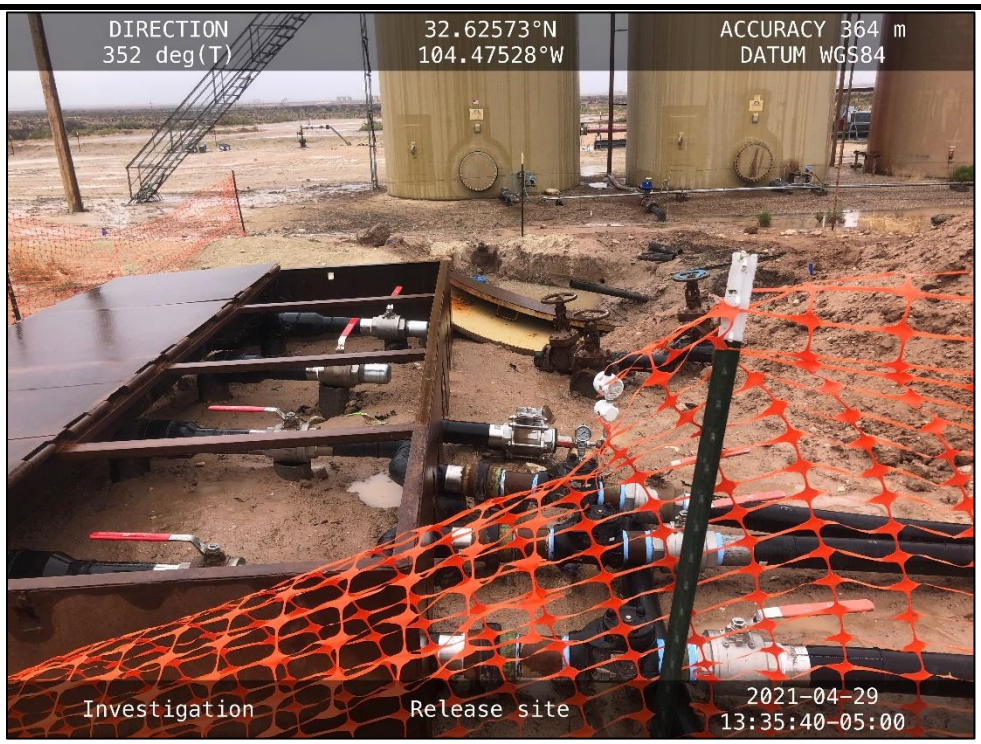


PHOTO 20: View near release point, facing north.



PHOTO 21: View near release point, facing south.



PHOTO 22: View of flow path, facing west.



PHOTO 23: View of pooling area, facing southeast.



PHOTO 24: View of release point, facing southeast.



PHOTO 25: View of release point, facing south.



PHOTO 26: View of impacted soils, facing west.

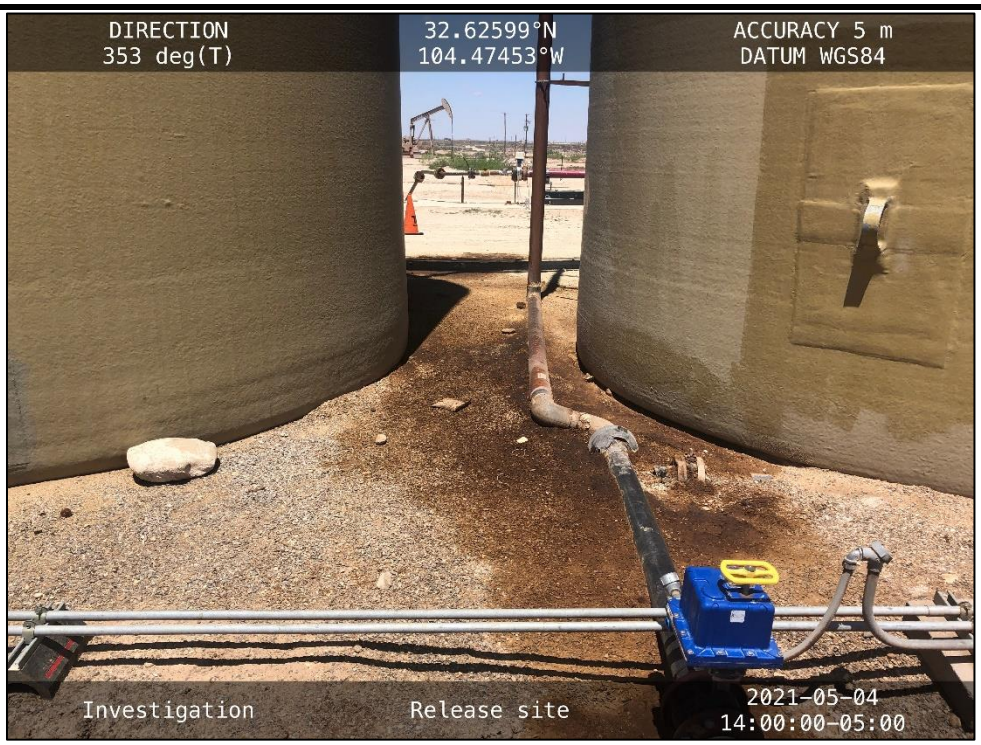


PHOTO 27: View of flow path, facing north.



PHOTO 28: View of impacted soils, facing northeast.



PHOTO 29: View of impacted soils, facing west.



PHOTO 30: View of pooling areas, facing west.



PHOTO 31: View of remediation beginning, facing south.



PHOTO 32: View of remediation around the tank battery, facing west.



PHOTO 33: View of trenching within excavation northwest corner, facing north.



PHOTO 34: View of trenching in northwest corner of excavation, facing north.



PHOTO 35: View of excavation in northwest corner, facing north.



PHOTO 36: View of excavation around (nAPP2127753131), facing south.

APPENDIX D – ANALYTICAL REPORT AND CHAIN OF CUSTODY

Certificate of Analysis Summary 650649

Terracon-Lubbock, Lubbock, TX

Project Name: Aikman SWD

Project Id: AR207018
Contact: Joseph Guesnier
Project Location:

Date Received in Lab: Wed Jan-29-20 10:51 am
Report Date: 30-JAN-20
Project Manager: Jessica Kramer

Analysis Requested													
	Lab Id:	650649-001		650649-002		650649-003		650649-004		650649-005		650649-006	
	Field Id:	HA-5 (0.0.5)		HA-5 (0.5-1)		HA-5 (1.5-2)		HA-6 (0.0.5)		HA-6 (0.5-1)		HA-6 (1.5-2)	
	Depth:	0-0.5 ft		0.5-1 ft		1.5-2 ft		0-0.5 ft		0.5-1 ft		1.5-2 ft	
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Jan-23-20 13:05		Jan-23-20 13:10		Jan-23-20 13:15		Jan-23-20 13:30		Jan-23-20 13:35		Jan-23-20 13:40	
BTEX by EPA 8021B	***Extracted:***	Jan-29-20 13:30		Jan-29-20 13:30		Jan-29-20 13:30		Jan-29-20 13:30		Jan-29-20 13:30		Jan-29-20 13:30	
	Analyzed:	Jan-30-20 00:52		Jan-30-20 02:05		Jan-30-20 02:28		Jan-30-20 02:52		Jan-30-20 01:16		Jan-30-20 01:40	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Benzene		<0.00828	0.0183	0.127	0.0909	<0.0178	0.0394	<0.0170	0.0377	<0.00809	0.0179	<0.00816	0.0181
Toluene		<0.00429	0.0183	<0.0213	0.0909	<0.00923	0.0394	<0.00881	0.0377	<0.00419	0.0179	<0.00422	0.0181
Ethylbenzene		<0.00564	0.0183	<0.0280	0.0909	<0.0121	0.0394	<0.0116	0.0377	<0.00551	0.0179	<0.00556	0.0181
m,p-Xylenes		<0.00625	0.0366	<0.0310	0.182	<0.0135	0.0789	<0.0128	0.0753	<0.00610	0.0358	<0.00616	0.0361
o-Xylene		<0.00625	0.0183	<0.0310	0.0909	<0.0135	0.0394	<0.0128	0.0377	<0.00610	0.0179	<0.00616	0.0181
Total Xylenes		<0.00625	0.0183	<0.0310	0.0909	<0.0135	0.0394	<0.0128	0.0377	<0.00610	0.0179	<0.00616	0.0181
Total BTEX		<0.00429	0.0183	0.127	0.0909	<0.00923	0.0394	<0.00881	0.0377	<0.00419	0.0179	<0.00422	0.0181
Chloride by EPA 300	***Extracted:***	Jan-29-20 13:00		Jan-29-20 13:00		Jan-29-20 13:00		Jan-29-20 13:00		Jan-29-20 13:00		Jan-29-20 13:00	
	Analyzed:	Jan-29-20 17:25		Jan-29-20 17:50		Jan-29-20 18:15		Jan-29-20 18:40		Jan-29-20 19:04		Jan-29-20 19:42	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		15900 D	2500	2940 D	250	2770 D	250	9240 D	1250	2320 D	250	2290 DX	250
DRO-ORO By SW8015B	***Extracted:***	Jan-29-20 11:30		Jan-29-20 11:30		Jan-29-20 11:30		Jan-29-20 11:30		Jan-29-20 11:30		Jan-29-20 11:30	
	Analyzed:	Jan-29-20 22:45		Jan-30-20 04:07		Jan-30-20 01:47		Jan-30-20 02:23		Jan-30-20 02:58		Jan-30-20 03:33	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Diesel Range Organics (DRO)		<7.47	25.0	1060	50.4	<7.44	24.9	<7.56	25.3	<7.49	25.1	<7.45	24.9
Oil Range Hydrocarbons (ORO)		<7.47	25.0	35.0 J	50.4	<7.44	24.9	<7.56	25.3	<7.49	25.1	<7.45	24.9
TPH GRO by EPA 8015 Mod.	***Extracted:***	Jan-29-20 13:30		Jan-29-20 13:30		Jan-29-20 13:30		Jan-29-20 13:30		Jan-29-20 13:30		Jan-29-20 13:30	
	Analyzed:	Jan-30-20 00:52		Jan-30-20 02:05		Jan-30-20 02:28		Jan-30-20 02:52		Jan-30-20 01:16		Jan-30-20 01:40	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
TPH-GRO		0.381 J	3.66	14.1 J	18.2	1.87 J	7.89	3.27 J	7.53	<0.242	3.58	<0.245	3.61

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.
XENCO Laboratories assumes no responsibility and makes no warranty to the end use of the data hereby presented.
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

Jessica Kramer
Project Assistant

Final 1.000

Analytical Report 650649

for

Terracon-Lubbock

Project Manager: Joseph Guesnier

Aikman SWD

AR207018

30-JAN-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)

30-JAN-20

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

Reference: XENCO Report No(s): **650649**
Aikman SWD
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) 650649. 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. 650649 will be filed for 45 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

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

Respectfully,

Jessica Kramer

Jessica Kramer
Project Assistant

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

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

Sample Cross Reference 650649

Terracon-Lubbock, Lubbock, TX

Aikman SWD

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
HA-5 (0.0.5)	S	01-23-20 13:05	0 - 0.5 ft	650649-001
HA-5 (0.5-1)	S	01-23-20 13:10	0.5 - 1 ft	650649-002
HA-5 (1.5-2)	S	01-23-20 13:15	1.5 - 2 ft	650649-003
HA-6 (0.0.5)	S	01-23-20 13:30	0 - 0.5 ft	650649-004
HA-6 (0.5-1)	S	01-23-20 13:35	0.5 - 1 ft	650649-005
HA-6 (1.5-2)	S	01-23-20 13:40	1.5 - 2 ft	650649-006

CASE NARRATIVE

Client Name: Terracon-Lubbock

Project Name: Aikman SWD

Project ID: *AR207018*
Work Order Number(s): *650649*

Report Date: *30-JAN-20*
Date Received: *01/29/2020*

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:

BTEX Samples 650649-002, 650649-003, and 650649-004 were diluted due to hydrocarbons beyond xylene.

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3114869 DRO-ORO By SW8015B
Surrogate Tricosane recovered below QC limits Data confirmed by re-analysis. Samples affected are: 7695489-1-BKS,7695489-1-BLK,650649-001 S,650649-001 SD,650649-003,650649-004,650649-006,650649-001.

Lab Sample ID 650649-001 was randomly selected for Matrix Spike/Matrix Spike Duplicate (MS/MSD). Diesel Range Organics (DRO) Relative Percent Difference (RPD) between matrix spike and duplicate was above quality control limits. .
Samples in the analytical batch are: 650649-001, -002, -003, -004, -005, -006
Lab Control spike RPDs withing control limits; therefore the data was accepted

Outlier/s are due to possible matrix interference.

Batch: LBA-3114924 BTEX by EPA 8021B
Samples 650649-002, 650649-003, and 650649-004 were diluted due to hydrocarbons beyond xylene.

Batch: LBA-3114968 Chloride by EPA 300
Lab Sample ID 650658-001 was randomly selected for Matrix Spike/Matrix Spike Duplicate (MS/MSD). Chloride recovered above QC limits in the Matrix Spike and Matrix Spike Duplicate. Outlier/s are due to possible matrix interference. Samples in the analytical batch are: 650649-001, -002, -003, -004, -005, -006.
The Laboratory Control Sample for Chloride is within laboratory Control Limits, therefore the data was accepted.

Certificate of Analytical Results 650649

Terracon-Lubbock, Lubbock, TX

Aikman SWD

Sample Id: **HA-5 (0.0.5)** Matrix: Soil Date Received:01.29.20 10.51

Lab Sample Id: 650649-001 Date Collected: 01.23.20 13.05 Sample Depth: 0 - 0.5 ft

Analytical Method: Chloride by EPA 300 Prep Method: E300P

Tech: RNL % Moisture:

Analyst: RNL Date Prep: 01.29.20 13.00 Basis: Wet Weight

Seq Number: 3114968

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**15900**	2500	57.2	mg/kg	01.29.20 17.38	D	100

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

Tech: MIT % Moisture:

Analyst: MIT Date Prep: 01.29.20 11.30 Basis: Wet Weight

Seq Number: 3114869

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Diesel Range Organics (DRO)	C10C28DRO	<7.47	25.0	7.47	mg/kg	01.29.20 22.45	UF	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<7.47	25.0	7.47	mg/kg	01.29.20 22.45	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
Tricosane	638-67-5	64	%	65-144	01.29.20 22.45	**
n-Triacontane	638-68-6	90	%	46-152	01.29.20 22.45	

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

Tech: MIT % Moisture:

Analyst: MIT Date Prep: 01.29.20 13.30 Basis: Wet Weight

Seq Number: 3114924

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00828	0.0183	0.00828	mg/kg	01.30.20 00.52	U	1
Toluene	108-88-3	<0.00429	0.0183	0.00429	mg/kg	01.30.20 00.52	U	1
Ethylbenzene	100-41-4	<0.00564	0.0183	0.00564	mg/kg	01.30.20 00.52	U	1
m,p-Xylenes	179601-23-1	<0.00625	0.0366	0.00625	mg/kg	01.30.20 00.52	U	1
o-Xylene	95-47-6	<0.00625	0.0183	0.00625	mg/kg	01.30.20 00.52	U	1
Total Xylenes	1330-20-7	<0.00625	0.0183	0.00625	mg/kg	01.30.20 00.52	U	1
Total BTEX		<0.00429	0.0183	0.00429	mg/kg	01.30.20 00.52	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	97	%	68-120	01.30.20 00.52	
a,a,a-Trifluorotoluene	98-08-8	125	%	71-121	01.30.20 00.52	**

Certificate of Analytical Results 650649

Terracon-Lubbock, Lubbock, TX

Aikman SWD

Sample Id:	**HA-5 (0.0.5)**	Matrix:	Soil	Date Received:	01.29.20 10.51
Lab Sample Id:	650649-001	Date Collected:	01.23.20 13.05	Sample Depth:	0 - 0.5 ft
Analytical Method:	TPH GRO by EPA 8015 Mod.			Prep Method:	SW5030B
Tech:	MIT			% Moisture:	
Analyst:	MIT	Date Prep:	01.29.20 13.30	Basis:	Wet Weight
Seq Number:	3114927				

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
TPH-GRO	8006-61-9	**0.381**	3.66	0.248	mg/kg	01.30.20 00.52	J	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	80	%	76-123	01.30.20 00.52	
a,a,a-Trifluorotoluene	98-08-8	95	%	69-120	01.30.20 00.52	

Certificate of Analytical Results 650649

Terracon-Lubbock, Lubbock, TX

Aikman SWD

Sample Id:	**HA-5 (0.5-1)**	Matrix:	Soil	Date Received:	01.29.20 10.51
Lab Sample Id:	650649-002	Date Collected:	01.23.20 13.10	Sample Depth:	0.5 - 1 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	RNL			% Moisture:	
Analyst:	RNL	Date Prep:	01.29.20 13.00	Basis:	Wet Weight
Seq Number:	3114968				

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**2940**	250	5.72	mg/kg	01.29.20 18.02	D	10

Analytical Method:	DRO-ORO By SW8015B			Prep Method:	SW8015P
Tech:	MIT			% Moisture:	
Analyst:	MIT	Date Prep:	01.29.20 11.30	Basis:	Wet Weight
Seq Number:	3114869				

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Diesel Range Organics (DRO)	C10C28DRO	**1060**	50.4	15.1	mg/kg	01.30.20 04.07		2
Oil Range Hydrocarbons (ORO)	PHCG2835	**35.0**	50.4	15.1	mg/kg	01.30.20 04.07	J	2

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
Tricosane	638-67-5	250	%	65-144	01.30.20 04.07	**
n-Triacontane	638-68-6	121	%	46-152	01.30.20 04.07	

Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MIT			% Moisture:	
Analyst:	MIT	Date Prep:	01.29.20 13.30	Basis:	Wet Weight
Seq Number:	3114924				

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	**0.127**	0.0909	0.0411	mg/kg	01.30.20 02.05		5
Toluene	108-88-3	<0.0213	0.0909	0.0213	mg/kg	01.30.20 02.05	U	5
Ethylbenzene	100-41-4	<0.0280	0.0909	0.0280	mg/kg	01.30.20 02.05	U	5
m,p-Xylenes	179601-23-1	<0.0310	0.182	0.0310	mg/kg	01.30.20 02.05	U	5
o-Xylene	95-47-6	<0.0310	0.0909	0.0310	mg/kg	01.30.20 02.05	U	5
Total Xylenes	1330-20-7	<0.0310	0.0909	0.0310	mg/kg	01.30.20 02.05	U	5
Total BTEX		**0.127**	0.0909	0.0213	mg/kg	01.30.20 02.05		5

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	103	%	68-120	01.30.20 02.05	
a,a,a-Trifluorotoluene	98-08-8	118	%	71-121	01.30.20 02.05	

Certificate of Analytical Results 650649

Terracon-Lubbock, Lubbock, TX

Aikman SWD

Sample Id:	**HA-5 (0.5-1)**	Matrix:	Soil	Date Received:	01.29.20 10.51
Lab Sample Id:	650649-002	Date Collected:	01.23.20 13.10	Sample Depth:	0.5 - 1 ft
Analytical Method:	TPH GRO by EPA 8015 Mod.			Prep Method:	SW5030B
Tech:	MIT			% Moisture:	
Analyst:	MIT	Date Prep:	01.29.20 13.30	Basis:	Wet Weight
Seq Number:	3114927				

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
TPH-GRO	8006-61-9	**14.1**	18.2	1.23	mg/kg	01.30.20 02.05	J	5

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	84	%	76-123	01.30.20 02.05	
a,a,a-Trifluorotoluene	98-08-8	89	%	69-120	01.30.20 02.05	

Certificate of Analytical Results 650649

Terracon-Lubbock, Lubbock, TX

Aikman SWD

Sample Id: **HA-5 (1.5-2)** Matrix: Soil Date Received:01.29.20 10.51

Lab Sample Id: 650649-003 Date Collected: 01.23.20 13.15 Sample Depth: 1.5 - 2 ft

Analytical Method: Chloride by EPA 300 Prep Method: E300P

Tech: RNL % Moisture:

Analyst: RNL Date Prep: 01.29.20 13.00 Basis: Wet Weight

Seq Number: 3114968

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**2770**	250	5.72	mg/kg	01.29.20 18.27	D	10

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

Tech: MIT % Moisture:

Analyst: MIT Date Prep: 01.29.20 11.30 Basis: Wet Weight

Seq Number: 3114869

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Diesel Range Organics (DRO)	C10C28DRO	<7.44	24.9	7.44	mg/kg	01.30.20 01.47	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<7.44	24.9	7.44	mg/kg	01.30.20 01.47	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
Tricosane	638-67-5	56	%	65-144	01.30.20 01.47	**
n-Triacontane	638-68-6	77	%	46-152	01.30.20 01.47	

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

Tech: MIT % Moisture:

Analyst: MIT Date Prep: 01.29.20 13.30 Basis: Wet Weight

Seq Number: 3114924

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.0178	0.0394	0.0178	mg/kg	01.30.20 02.28	U	2
Toluene	108-88-3	<0.00923	0.0394	0.00923	mg/kg	01.30.20 02.28	U	2
Ethylbenzene	100-41-4	<0.0121	0.0394	0.0121	mg/kg	01.30.20 02.28	U	2
m,p-Xylenes	179601-23-1	<0.0135	0.0789	0.0135	mg/kg	01.30.20 02.28	U	2
o-Xylene	95-47-6	<0.0135	0.0394	0.0135	mg/kg	01.30.20 02.28	U	2
Total Xylenes	1330-20-7	<0.0135	0.0394	0.0135	mg/kg	01.30.20 02.28	U	2
Total BTEX		<0.00923	0.0394	0.00923	mg/kg	01.30.20 02.28	U	2

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	111	%	68-120	01.30.20 02.28	
a,a,a-Trifluorotoluene	98-08-8	132	%	71-121	01.30.20 02.28	**

Certificate of Analytical Results 650649

Terracon-Lubbock, Lubbock, TX

Aikman SWD

Sample Id:	**HA-5 (1.5-2)**	Matrix:	Soil	Date Received:	01.29.20 10.51
Lab Sample Id:	650649-003	Date Collected:	01.23.20 13.15	Sample Depth:	1.5 - 2 ft
Analytical Method:	TPH GRO by EPA 8015 Mod.			Prep Method:	SW5030B
Tech:	MIT			% Moisture:	
Analyst:	MIT	Date Prep:	01.29.20 13.30	Basis:	Wet Weight
Seq Number:	3114927				

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
TPH-GRO	8006-61-9	**1.87**	7.89	0.535	mg/kg	01.30.20 02.28	J	2

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	91	%	76-123	01.30.20 02.28	
a,a,a-Trifluorotoluene	98-08-8	101	%	69-120	01.30.20 02.28	

Certificate of Analytical Results 650649

Terracon-Lubbock, Lubbock, TX

Aikman SWD

Sample Id: **HA-6 (0.0.5)** Matrix: Soil Date Received:01.29.20 10.51

Lab Sample Id: 650649-004 Date Collected: 01.23.20 13.30 Sample Depth: 0 - 0.5 ft

Analytical Method: Chloride by EPA 300 Prep Method: E300P

Tech: RNL % Moisture:

Analyst: RNL Date Prep: 01.29.20 13.00 Basis: Wet Weight

Seq Number: 3114968

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**9240**	1250	28.6	mg/kg	01.29.20 18.52	D	50

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

Tech: MIT % Moisture:

Analyst: MIT Date Prep: 01.29.20 11.30 Basis: Wet Weight

Seq Number: 3114869

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Diesel Range Organics (DRO)	C10C28DRO	<7.56	25.3	7.56	mg/kg	01.30.20 02.23	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<7.56	25.3	7.56	mg/kg	01.30.20 02.23	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
Tricosane	638-67-5	60	%	65-144	01.30.20 02.23	**
n-Triacontane	638-68-6	86	%	46-152	01.30.20 02.23	

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

Tech: MIT % Moisture:

Analyst: MIT Date Prep: 01.29.20 13.30 Basis: Wet Weight

Seq Number: 3114924

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.0170	0.0377	0.0170	mg/kg	01.30.20 02.52	U	2
Toluene	108-88-3	<0.00881	0.0377	0.00881	mg/kg	01.30.20 02.52	U	2
Ethylbenzene	100-41-4	<0.0116	0.0377	0.0116	mg/kg	01.30.20 02.52	U	2
m,p-Xylenes	179601-23-1	<0.0128	0.0753	0.0128	mg/kg	01.30.20 02.52	U	2
o-Xylene	95-47-6	<0.0128	0.0377	0.0128	mg/kg	01.30.20 02.52	U	2
Total Xylenes	1330-20-7	<0.0128	0.0377	0.0128	mg/kg	01.30.20 02.52	U	2
Total BTEX		<0.00881	0.0377	0.00881	mg/kg	01.30.20 02.52	U	2

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	110	%	68-120	01.30.20 02.52	
a,a,a-Trifluorotoluene	98-08-8	128	%	71-121	01.30.20 02.52	**

Certificate of Analytical Results 650649

Terracon-Lubbock, Lubbock, TX

Aikman SWD

Sample Id:	**HA-6 (0.0.5)**	Matrix:	Soil	Date Received:	01.29.20 10.51
Lab Sample Id:	650649-004	Date Collected:	01.23.20 13.30	Sample Depth:	0 - 0.5 ft
Analytical Method:	TPH GRO by EPA 8015 Mod.			Prep Method:	SW5030B
Tech:	MIT			% Moisture:	
Analyst:	MIT	Date Prep:	01.29.20 13.30	Basis:	Wet Weight
Seq Number:	3114927				

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
TPH-GRO	8006-61-9	**3.27**	7.53	0.510	mg/kg	01.30.20 02.52	J	2

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	97	%	76-123	01.30.20 02.52	
a,a,a-Trifluorotoluene	98-08-8	98	%	69-120	01.30.20 02.52	

Certificate of Analytical Results 650649

Terracon-Lubbock, Lubbock, TX

Aikman SWD

Sample Id: **HA-6 (0.5-1)** Matrix: Soil Date Received:01.29.20 10.51

Lab Sample Id: 650649-005 Date Collected: 01.23.20 13.35 Sample Depth: 0.5 - 1 ft

Analytical Method: Chloride by EPA 300 Prep Method: E300P

Tech: RNL % Moisture:

Analyst: RNL Date Prep: 01.29.20 13.00 Basis: Wet Weight

Seq Number: 3114968

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**2320**	250	5.72	mg/kg	01.29.20 19.29	D	10

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

Tech: MIT % Moisture:

Analyst: MIT Date Prep: 01.29.20 11.30 Basis: Wet Weight

Seq Number: 3114869

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Diesel Range Organics (DRO)	C10C28DRO	<7.49	25.1	7.49	mg/kg	01.30.20 02.58	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<7.49	25.1	7.49	mg/kg	01.30.20 02.58	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
Tricosane	638-67-5	66	%	65-144	01.30.20 02.58	
n-Triacontane	638-68-6	93	%	46-152	01.30.20 02.58	

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

Tech: MIT % Moisture:

Analyst: MIT Date Prep: 01.29.20 13.30 Basis: Wet Weight

Seq Number: 3114924

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00809	0.0179	0.00809	mg/kg	01.30.20 01.16	U	1
Toluene	108-88-3	<0.00419	0.0179	0.00419	mg/kg	01.30.20 01.16	U	1
Ethylbenzene	100-41-4	<0.00551	0.0179	0.00551	mg/kg	01.30.20 01.16	U	1
m,p-Xylenes	179601-23-1	<0.00610	0.0358	0.00610	mg/kg	01.30.20 01.16	U	1
o-Xylene	95-47-6	<0.00610	0.0179	0.00610	mg/kg	01.30.20 01.16	U	1
Total Xylenes	1330-20-7	<0.00610	0.0179	0.00610	mg/kg	01.30.20 01.16	U	1
Total BTEX		<0.00419	0.0179	0.00419	mg/kg	01.30.20 01.16	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	104	%	68-120	01.30.20 01.16	
a,a,a-Trifluorotoluene	98-08-8	127	%	71-121	01.30.20 01.16	**

Certificate of Analytical Results 650649

Terracon-Lubbock, Lubbock, TX

Aikman SWD

Sample Id:	**HA-6 (0.5-1)**	Matrix:	Soil	Date Received:	01.29.20 10.51
Lab Sample Id:	650649-005	Date Collected:	01.23.20 13.35	Sample Depth:	0.5 - 1 ft
Analytical Method:	TPH GRO by EPA 8015 Mod.			Prep Method:	SW5030B
Tech:	MIT			% Moisture:	
Analyst:	MIT	Date Prep:	01.29.20 13.30	Basis:	Wet Weight
Seq Number:	3114927				

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
TPH-GRO	8006-61-9	<0.242	3.58	0.242	mg/kg	01.30.20 01.16	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	85	%	76-123	01.30.20 01.16	
a,a,a-Trifluorotoluene	98-08-8	96	%	69-120	01.30.20 01.16	

Certificate of Analytical Results 650649

Terracon-Lubbock, Lubbock, TX

Aikman SWD

Sample Id:	**HA-6 (1.5-2)**	Matrix:	Soil	Date Received:	01.29.20 10.51
Lab Sample Id:	650649-006	Date Collected:	01.23.20 13.40	Sample Depth:	1.5 - 2 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	RNL			% Moisture:	
Analyst:	RNL	Date Prep:	01.29.20 13.00	Basis:	Wet Weight
Seq Number:	3114968				

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**2290**	250	5.72	mg/kg	01.29.20 19.54	DX	10

Analytical Method:	DRO-ORO By SW8015B			Prep Method:	SW8015P
Tech:	MIT			% Moisture:	
Analyst:	MIT	Date Prep:	01.29.20 11.30	Basis:	Wet Weight
Seq Number:	3114869				

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Diesel Range Organics (DRO)	C10C28DRO	<7.45	24.9	7.45	mg/kg	01.30.20 03.33	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<7.45	24.9	7.45	mg/kg	01.30.20 03.33	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
Tricosane	638-67-5	63	%	65-144	01.30.20 03.33	**
n-Triacontane	638-68-6	87	%	46-152	01.30.20 03.33	

Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MIT			% Moisture:	
Analyst:	MIT	Date Prep:	01.29.20 13.30	Basis:	Wet Weight
Seq Number:	3114924				

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00816	0.0181	0.00816	mg/kg	01.30.20 01.40	U	1
Toluene	108-88-3	<0.00422	0.0181	0.00422	mg/kg	01.30.20 01.40	U	1
Ethylbenzene	100-41-4	<0.00556	0.0181	0.00556	mg/kg	01.30.20 01.40	U	1
m,p-Xylenes	179601-23-1	<0.00616	0.0361	0.00616	mg/kg	01.30.20 01.40	U	1
o-Xylene	95-47-6	<0.00616	0.0181	0.00616	mg/kg	01.30.20 01.40	U	1
Total Xylenes	1330-20-7	<0.00616	0.0181	0.00616	mg/kg	01.30.20 01.40	U	1
Total BTEX		<0.00422	0.0181	0.00422	mg/kg	01.30.20 01.40	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	101	%	68-120	01.30.20 01.40	
a,a,a-Trifluorotoluene	98-08-8	127	%	71-121	01.30.20 01.40	**

Certificate of Analytical Results 650649

Terracon-Lubbock, Lubbock, TX

Aikman SWD

Sample Id:	**HA-6 (1.5-2)**	Matrix:	Soil	Date Received:	01.29.20 10.51
Lab Sample Id:	650649-006	Date Collected:	01.23.20 13.40	Sample Depth:	1.5 - 2 ft
Analytical Method:	TPH GRO by EPA 8015 Mod.			Prep Method:	SW5030B
Tech:	MIT			% Moisture:	
Analyst:	MIT	Date Prep:	01.29.20 13.30	Basis:	Wet Weight
Seq Number:	3114927				

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
TPH-GRO	8006-61-9	<0.245	3.61	0.245	mg/kg	01.30.20 01.40	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	82	%	76-123	01.30.20 01.40	
a,a,a-Trifluorotoluene	98-08-8	97	%	69-120	01.30.20 01.40	

Flagging Criteria

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

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

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

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

F RPD exceeded lab control limits.

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

U Analyte was not detected.

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

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

K Sample analyzed outside of recommended hold time.

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

** Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit.

RL Reporting Limit

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

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

DL Method Detection Limit

NC Non-Calculable

SMP Client Sample **BLK** Method Blank

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

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

+ NELAC certification not offered for this compound.

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

QC Summary 650649

Terracon-Lubbock

Aikman SWD

Analytical Method: **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3114968 Matrix: Solid Date Prep: 01.29.20
MB Sample Id: 7695560-1-BLK LCS Sample Id: 7695560-1-BKS LCSD Sample Id: 7695560-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<0.572	250	241	96	241	96	90-110	0	20	mg/kg	01.29.20 16:10	

Analytical Method: **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3114968 Matrix: Soil Date Prep: 01.29.20
Parent Sample Id: 650649-006 MS Sample Id: 650649-006 S MSD Sample Id: 650649-006 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	1800	250	2550	300	2520	288	80-120	1	20	mg/kg	01.29.20 20:07	X

Analytical Method: **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3114968 Matrix: Soil Date Prep: 01.29.20
Parent Sample Id: 650658-001 MS Sample Id: 650658-001 S MSD Sample Id: 650658-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	8.45	250	254	98	245	95	80-120	4	20	mg/kg	01.29.20 17:00	

Analytical Method: **DRO-ORO By SW8015B** Prep Method: SW8015P
Seq Number: 3114869 Matrix: Solid Date Prep: 01.29.20
MB Sample Id: 7695489-1-BLK LCS Sample Id: 7695489-1-BKS LCSD Sample Id: 7695489-1-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	82.8	83	92.6	93	63-139	11	20	mg/kg	01.29.20 19:46	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
Tricosane	63	**	64	**	66		65-144	%	01.29.20 19:46
n-Triacontane	90		86		89		46-152	%	01.29.20 19:46

Analytical Method: **DRO-ORO By SW8015B** Prep Method: SW8015P
Seq Number: 3114869 Matrix: Solid Date Prep: 01.29.20
MB Sample Id: 7695489-1-BLK

Parameter	MB Result	Units	Analysis Date	Flag
Oil Range Hydrocarbons (ORO)	<7.48	mg/kg	01.29.20 22:10	

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

QC Summary 650649

Terracon-Lubbock

Aikman SWD

Analytical Method: **DRO-ORO By SW8015B** Prep Method: SW8015P
Seq Number: 3114869 Matrix: Soil Date Prep: 01.29.20
Parent Sample Id: 650649-001 MS Sample Id: 650649-001 S MSD Sample Id: 650649-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Diesel Range Organics (DRO)	<7.44	99.5	63.2	64	78.9	80	63-139	22	20	mg/kg	01.29.20 23:20	F

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
Tricosane	53	**	57	**	65-144	%	01.29.20 23:20
n-Triacontane	72		78		46-152	%	01.29.20 23:20

Analytical Method: **BTEX by EPA 8021B** Prep Method: SW5030B
Seq Number: 3114924 Matrix: Solid Date Prep: 01.29.20
MB Sample Id: 7695540-1-BLK LCS Sample Id: 7695540-1-BKS LCSD Sample Id: 7695540-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00904	2.00	2.04	102	1.99	100	55-120	2	20	mg/kg	01.29.20 19:38	
Toluene	<0.00468	2.00	2.14	107	2.01	101	77-120	6	20	mg/kg	01.29.20 19:38	
Ethylbenzene	<0.00616	2.00	2.16	108	2.07	104	77-120	4	20	mg/kg	01.29.20 19:38	
m,p-Xylenes	<0.00682	4.00	4.28	107	4.14	104	78-120	3	20	mg/kg	01.29.20 19:38	
o-Xylene	<0.00682	2.00	2.15	108	2.09	105	78-120	3	20	mg/kg	01.29.20 19:38	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
4-Bromofluorobenzene	105		108		86		68-120	%	01.29.20 19:38
a,a,a-Trifluorotoluene	118		122	**	95		71-121	%	01.29.20 19:38

Analytical Method: **BTEX by EPA 8021B** Prep Method: SW5030B
Seq Number: 3114924 Matrix: Soil Date Prep: 01.29.20
Parent Sample Id: 650658-001 MS Sample Id: 650658-001 S MSD Sample Id: 650658-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00879	1.95	1.63	84	1.73	98	54-120	6	25	mg/kg	01.29.20 22:51	
Toluene	<0.00455	1.95	1.59	82	1.72	98	57-120	8	25	mg/kg	01.29.20 22:51	
Ethylbenzene	<0.00599	1.95	1.59	82	1.73	98	58-131	8	25	mg/kg	01.29.20 22:51	
m,p-Xylenes	<0.00663	3.89	3.14	81	3.44	97	62-124	9	25	mg/kg	01.29.20 22:51	
o-Xylene	<0.00663	1.95	1.56	80	1.69	96	62-124	8	25	mg/kg	01.29.20 22:51	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
4-Bromofluorobenzene	97		96		68-120	%	01.29.20 22:51
a,a,a-Trifluorotoluene	127	**	127	**	71-121	%	01.29.20 22:51

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

QC Summary 650649

Terracon-Lubbock

Aikman SWD

Analytical Method: **TPH GRO by EPA 8015 Mod.** Prep Method: SW5030B
Seq Number: 3114927 Matrix: Solid Date Prep: 01.29.20
MB Sample Id: 7695541-1-BLK LCS Sample Id: 7695541-1-BKS LCSD Sample Id: 7695541-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
TPH-GRO	<0.271	20.0	18.3	92	19.6	98	35-129	7	20	mg/kg	01.29.20 20:26	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
4-Bromofluorobenzene	86		122		119		76-123	%	01.29.20 20:26
a,a,a-Trifluorotoluene	90		95		95		69-120	%	01.29.20 20:26

Analytical Method: **TPH GRO by EPA 8015 Mod.** Prep Method: SW5030B
Seq Number: 3114927 Matrix: Soil Date Prep: 01.29.20
Parent Sample Id: 650658-001 MS Sample Id: 650658-001 S MSD Sample Id: 650658-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
TPH-GRO	<0.267	19.7	14.6	74	15.7	87	35-129	7	20	mg/kg	01.29.20 23:39	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
4-Bromofluorobenzene	109		115		76-123	%	01.29.20 23:39
a,a,a-Trifluorotoluene	98		99		69-120	%	01.29.20 23:39

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

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

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

Released to Imaging: 8/29/2023 1:29:02 PM
Received by OCD: 4/10/2023 1:07:45 PM

650649

Terracon

CHAIN OF CUSTODY RECORD

650649

Laboratory: Xenco
Address: 6701 Aberdeen
Lubbock, Texas 79424

Office Location: Lubbock
Project Manager: Joseph Guesnier
Sampler's Name: Joseph Guesnier
Phone:
Contact: Joseph Guesnier (806-544-9276)
SRS #:
Sampler's Signature

Project Number: AR207018
Project Name: Aikman SWD

ANALYSIS REQUESTED

LAB USE ONLY
DUE DATE:
TEMP OF COOLER WHEN RECEIVED (°C): 3.1 / 3.2
Page 1 of 1

Matrix	Date	Time	Comp	Grab	Identifying Marks of Sample(s)	Start Depth	End Depth	No. Type of Containers: 2 oz Glass	4 oz Glass	5035 kit	40 ml VOA	BTEX (EPA Method 8021B)	TPH Extended 8015	Chloride (EPA Method 300)	Hold	Lab Sample ID
S	1/23/2020	13:05		X	HA-5 (0-0.5)	0'	0.5'		X			X	X	X		1
S	1/23/2020	13:10		X	HA-5 (0.5-1)	0.5'	1'		X			X	X	X		2
S	1/23/2020	13:15		X	HA-5 (1.5-2)	1.5'	2'		X			X	X	X		3
S	1/23/2020	13:30		X	HA-6 (0-0.5)	0'	0.5'		X			X	X	X		4
S	1/23/2020	13:35		X	HA-6 (0.5-1)	0.5'	1'		X			X	X	X		5
S	1/23/2020	13:40		X	HA-6 (1.5-2)	1.5'	2'		X			X	X	X		6

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

TRRP Laboratory Review Checklist ☐ Yes ☐ No

	Date	Time		Date	Time
Relinquished by (Signature)	1-23-2020	10:37am	Received by (Signature)	1/24/2020	10:37
Relinquished by (Signature)			Received by (Signature)		
Relinquished by (Signature)			Received by (Signature)		
Relinquished by (Signature)			Received by (Signature)		

NOTES: Client:
e-mail results to:
erin.loyd@terracon.com
jrguesnier@terracon.com

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

XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In

Client: Terracon-Lubbock

Date/ Time Received: 01.29.2020 10.51.00 AM

Work Order #: 650649

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)?	3.2
#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: Brenda Ward Date: 01.29.2020
Brenda Ward

Checklist reviewed by: Jessica Kramer Date: 01.30.2020
Jessica Kramer

Certificate of Analysis Summary 649282

Terracon-Lubbock, Lubbock, TX

Project Name: Aikman SWD

Project Id: AR197355
Contact: Joseph Guesnier
Project Location:

Date Received in Lab: Thu Jan-16-20 12:25 pm
Report Date: 21-JAN-20
Project Manager: Jessica Kramer

Analysis Requested													
	Lab Id:	649282-001		649282-002		649282-003		649282-004		649282-005		649282-006	
	Field Id:	SP-1		HA-1 1 (1.5-2)		HA-1 1 (3.5-4)		HA-2 1 (1.5-2)		HA-2 1 (3.5-4)		HA-3 1 (1.5-2)	
	Depth:			1.5-2 ft		3.5-4 ft		1.5-2 ft		3.5-4 ft		1.5-2 ft	
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Jan-14-20 10:00		Jan-14-20 10:05		Jan-14-20 10:10		Jan-14-20 10:15		Jan-14-20 10:20		Jan-14-20 10:25	
BTEX by EPA 8021B	***Extracted:***	Jan-20-20 13:00		Jan-20-20 13:00		Jan-20-20 13:00		Jan-20-20 13:00		Jan-20-20 13:00		Jan-20-20 13:00	
	Analyzed:	Jan-20-20 22:11		Jan-20-20 22:35		Jan-20-20 22:59		Jan-20-20 23:22		Jan-20-20 23:46		Jan-21-20 00:09	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Benzene		<0.00895	0.0198	<0.00861	0.0190	<0.00797	0.0176	<0.00893	0.0198	<0.00825	0.0182	<0.00868	0.0192
Toluene		<0.00463	0.0198	<0.00446	0.0190	<0.00413	0.0176	<0.00462	0.0198	<0.00427	0.0182	<0.00449	0.0192
Ethylbenzene		<0.00610	0.0198	<0.00587	0.0190	<0.00543	0.0176	<0.00609	0.0198	<0.00562	0.0182	<0.00591	0.0192
m,p-Xylenes		<0.00675	0.0396	<0.00650	0.0381	<0.00601	0.0353	<0.00674	0.0395	<0.00622	0.0365	<0.00655	0.0384
o-Xylene		<0.00675	0.0198	<0.00650	0.0190	<0.00601	0.0176	<0.00674	0.0198	<0.00622	0.0182	<0.00655	0.0192
Total Xylenes		<0.00675	0.0198	<0.00650	0.0190	<0.00601	0.0176	<0.00674	0.0198	<0.00622	0.0182	<0.00655	0.0192
Total BTEX		<0.00463	0.0198	<0.00446	0.0190	<0.00413	0.0176	<0.00462	0.0198	<0.00427	0.0182	<0.00449	0.0192
Chloride by EPA 300 **SUB: T104704215-19-30**	***Extracted:***	Jan-17-20 10:50		Jan-17-20 10:50		Jan-17-20 10:50		Jan-17-20 10:50		Jan-17-20 10:50		Jan-17-20 10:50	
	Analyzed:	Jan-17-20 14:00		Jan-17-20 14:09		Jan-17-20 14:18		Jan-17-20 14:26		Jan-17-20 14:35		Jan-17-20 14:44	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		10400	101	22.0	10.2	33.9	10.1	4160	98.8	70.2	9.84	149	9.98
DRO-ORO By SW8015B	***Extracted:***	Jan-20-20 13:00		Jan-20-20 13:00		Jan-20-20 13:00		Jan-20-20 13:00		Jan-20-20 13:00		Jan-20-20 13:00	
	Analyzed:	Jan-20-20 21:42		Jan-20-20 22:15		Jan-20-20 22:49		Jan-20-20 23:23		Jan-20-20 23:56		Jan-21-20 00:30	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Diesel Range Organics (DRO)		22.7 J	24.9	45.5	24.8	<7.42	24.8	<7.42	24.8	30.1	25.0	8.79 J	24.9
Oil Range Hydrocarbons (ORO)		<7.46	24.9	<7.43	24.8	<7.42	24.8	<7.42	24.8	<7.47	25.0	<7.45	24.9
TPH GRO by EPA 8015 Mod.	***Extracted:***	Jan-20-20 13:00		Jan-20-20 13:00		Jan-20-20 13:00		Jan-20-20 13:00		Jan-20-20 13:00		Jan-20-20 13:00	
	Analyzed:	Jan-20-20 22:11		Jan-20-20 22:35		Jan-20-20 22:59		Jan-20-20 23:22		Jan-20-20 23:46		Jan-21-20 00:09	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
TPH-GRO		0.398 J	3.96	<0.258	3.81	<0.239	3.53	<0.268	3.95	<0.247	3.65	<0.260	3.84

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

Version: 1.%

Jessica Kramer
Project Assistant

Final 1.000

Certificate of Analysis Summary 649282

Terracon-Lubbock, Lubbock, TX

Project Name: Aikman SWD

Project Id: AR197355
Contact: Joseph Guesnier
Project Location:

Date Received in Lab: Thu Jan-16-20 12:25 pm
Report Date: 21-JAN-20
Project Manager: Jessica Kramer

Analysis Requested									
	Lab Id:	649282-007		649282-008		649282-009			
	Field Id:	HA-3 1 (3.5-4)		HA-4 1 (0.5-1)		HA-4 1 (1.5-2)			
	Depth:	3.5-4 ft		0.5-1 ft		1.5-2 ft			
	Matrix:	SOIL		SOIL		SOIL			
	Sampled:	Jan-14-20 10:30		Jan-14-20 10:35		Jan-14-20 10:40			
BTEX by EPA 8021B	***Extracted:***	Jan-20-20 13:00		Jan-20-20 13:00		Jan-20-20 13:00			
	Analyzed:	Jan-20-20 19:50		Jan-21-20 00:34		Jan-21-20 00:57			
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL		
Benzene		<0.00831	0.0184	<0.00858	0.0190	<0.00871	0.0193		
Toluene		<0.00430	0.0184	<0.00444	0.0190	<0.00451	0.0193		
Ethylbenzene		<0.00566	0.0184	<0.00584	0.0190	<0.00593	0.0193		
m,p-Xylenes		<0.00627	0.0368	<0.00647	0.0380	<0.00657	0.0385		
o-Xylene		<0.00627	0.0184	<0.00647	0.0190	<0.00657	0.0193		
Total Xylenes		<0.00627	0.0184	<0.00647	0.0190	<0.00657	0.0193		
Total BTEX		<0.00430	0.0184	<0.00444	0.0190	<0.00451	0.0193		
Chloride by EPA 300 **SUB: T104704215-19-30**	***Extracted:***	Jan-17-20 10:50		Jan-17-20 10:50		Jan-17-20 10:50			
	Analyzed:	Jan-17-20 15:11		Jan-17-20 15:19		Jan-17-20 15:55			
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL		
Chloride		1090	9.84	6830	102	544	101		
DRO-ORO By SW8015B	***Extracted:***	Jan-20-20 13:00		Jan-20-20 13:00		Jan-20-20 13:00			
	Analyzed:	Jan-20-20 19:23		Jan-21-20 01:03		Jan-21-20 01:37			
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL		
Diesel Range Organics (DRO)		<7.49	25.1	<7.52	25.1	<7.47	25.0		
Oil Range Hydrocarbons (ORO)		<7.49	25.1	<7.52	25.1	<7.47	25.0		
TPH GRO by EPA 8015 Mod.	***Extracted:***	Jan-20-20 13:00		Jan-20-20 13:00		Jan-20-20 13:00			
	Analyzed:	Jan-20-20 19:50		Jan-21-20 00:34		Jan-21-20 00:57			
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL		
TPH-GRO		<0.249	3.68	0.313 J	3.80	<0.261	3.85		

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.

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Version: 1.%

Jessica Kramer
Project Assistant

Final 1.000

Analytical Report 649282

for

Terracon-Lubbock

Project Manager: Joseph Guesnier

Aikman SWD

AR197355

21-JAN-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)

21-JAN-20

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

Reference: XENCO Report No(s): **649282**
Aikman SWD
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) 649282. 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. 649282 will be filed for 45 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

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

Respectfully,

Jessica Kramer

Jessica Kramer
Project Assistant

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

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Sample Cross Reference 649282

Terracon-Lubbock, Lubbock, TX

Aikman SWD

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
SP-1	S	01-14-20 10:00		649282-001
HA-1 1 (1.5-2)	S	01-14-20 10:05	1.5 - 2 ft	649282-002
HA-1 1 (3.5-4)	S	01-14-20 10:10	3.5 - 4 ft	649282-003
HA-2 1 (1.5-2)	S	01-14-20 10:15	1.5 - 2 ft	649282-004
HA-2 1 (3.5-4)	S	01-14-20 10:20	3.5 - 4 ft	649282-005
HA-3 1 (1.5-2)	S	01-14-20 10:25	1.5 - 2 ft	649282-006
HA-3 1 (3.5-4)	S	01-14-20 10:30	3.5 - 4 ft	649282-007
HA-4 1 (0.5-1)	S	01-14-20 10:35	0.5 - 1 ft	649282-008
HA-4 1 (1.5-2)	S	01-14-20 10:40	1.5 - 2 ft	649282-009

CASE NARRATIVE

Client Name: Terracon-Lubbock

Project Name: Aikman SWD

Project ID: *AR197355*
Work Order Number(s): *649282*

Report Date: *21-JAN-20*
Date Received: *01/16/2020*

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-3113870 BTEX-MTBE by EPA 8021B
Soil samples were not received in Terracore kits and therefore were prepared by method 5030.
Surrogate a,a,a-Trifluorotoluene recovered above QC limits Data confirmed by re-analysis. Samples affected are: 7694808-1-BLK,649282-007 S,649282-003,649282-005,649282-002.

Batch: LBA-3113871 TPH GRO by EPA 8015 Mod.
Surrogate 4-Bromofluorobenzene recovered below QC limits. Matrix interferences is suspected; data confirmed by re-analysis.
Samples affected are: 649282-007,649282-009.

Outlier/s are due to possible matrix interference.

Lab Sample ID 649282-007 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: 649282-001, -002, -003, -004, -005, -006, -007, -008, -009

Batch: LBA-3113880 DRO-ORO By SW8015B
Sample 649282-002 was spiked with double the amount of surrogate.

Certificate of Analytical Results 649282

Terracon-Lubbock, Lubbock, TX

Aikman SWD

Sample Id: **SP-1** Matrix: Soil Date Received:01.16.20 12.25

Lab Sample Id: 649282-001 Date Collected: 01.14.20 10.00

Analytical Method: Chloride by EPA 300 Prep Method: E300P

Tech: JYM % Moisture:

Analyst: JYM Date Prep: 01.17.20 10.50 Basis: Wet Weight

Seq Number: 3113663 SUB: T104704215-19-30

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**10400**	101	3.56	mg/kg	01.17.20 14.00		10

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

Tech: MIT % Moisture:

Analyst: MIT Date Prep: 01.20.20 13.00 Basis: Wet Weight

Seq Number: 3113880

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Diesel Range Organics (DRO)	C10C28DRO	**22.7**	24.9	7.46	mg/kg	01.20.20 21.42	J	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<7.46	24.9	7.46	mg/kg	01.20.20 21.42	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
Tricosane	638-67-5	119	%	65-144	01.20.20 21.42	
n-Triacontane	638-68-6	132	%	46-152	01.20.20 21.42	

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

Tech: MIT % Moisture:

Analyst: MIT Date Prep: 01.20.20 13.00 Basis: Wet Weight

Seq Number: 3113870

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00895	0.0198	0.00895	mg/kg	01.20.20 22.11	U	1
Toluene	108-88-3	<0.00463	0.0198	0.00463	mg/kg	01.20.20 22.11	U	1
Ethylbenzene	100-41-4	<0.00610	0.0198	0.00610	mg/kg	01.20.20 22.11	U	1
m,p-Xylenes	179601-23-1	<0.00675	0.0396	0.00675	mg/kg	01.20.20 22.11	U	1
o-Xylene	95-47-6	<0.00675	0.0198	0.00675	mg/kg	01.20.20 22.11	U	1
Total Xylenes	1330-20-7	<0.00675	0.0198	0.00675	mg/kg	01.20.20 22.11	U	1
Total BTEX		<0.00463	0.0198	0.00463	mg/kg	01.20.20 22.11	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	99	%	68-120	01.20.20 22.11	
a,a,a-Trifluorotoluene	98-08-8	117	%	71-121	01.20.20 22.11	

Certificate of Analytical Results 649282

Terracon-Lubbock, Lubbock, TX

Aikman SWD

Sample Id:	**SP-1**	Matrix:	Soil	Date Received:	01.16.20 12.25
Lab Sample Id:	649282-001	Date Collected:	01.14.20 10.00		
Analytical Method:	TPH GRO by EPA 8015 Mod.			Prep Method:	SW5030B
Tech:	MIT			% Moisture:	
Analyst:	MIT	Date Prep:	01.20.20 13.00	Basis:	Wet Weight
Seq Number:	3113871				

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
TPH-GRO	8006-61-9	**0.398**	3.96	0.268	mg/kg	01.20.20 22.11	J	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	86	%	76-123	01.20.20 22.11	
a,a,a-Trifluorotoluene	98-08-8	93	%	69-120	01.20.20 22.11	

Certificate of Analytical Results 649282

Terracon-Lubbock, Lubbock, TX

Aikman SWD

Sample Id:	**HA-1 1 (1.5-2)**	Matrix:	Soil	Date Received:	01.16.20 12.25
Lab Sample Id:	649282-002	Date Collected:	01.14.20 10.05	Sample Depth:	1.5 - 2 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	JYM			% Moisture:	
Analyst:	JYM	Date Prep:	01.17.20 10.50	Basis:	Wet Weight
Seq Number:	3113663			SUB:	T104704215-19-30

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**22.0**	10.2	0.360	mg/kg	01.17.20 14.09		1

Analytical Method:	DRO-ORO By SW8015B			Prep Method:	SW8015P
Tech:	MIT			% Moisture:	
Analyst:	MIT	Date Prep:	01.20.20 13.00	Basis:	Wet Weight
Seq Number:	3113880				

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Diesel Range Organics (DRO)	C10C28DRO	**45.5**	24.8	7.43	mg/kg	01.20.20 22.15		1
Oil Range Hydrocarbons (ORO)	PHCG2835	<7.43	24.8	7.43	mg/kg	01.20.20 22.15	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
Tricosane	638-67-5	249	%	65-144	01.20.20 22.15	**
n-Triacontane	638-68-6	277	%	46-152	01.20.20 22.15	**

Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MIT			% Moisture:	
Analyst:	MIT	Date Prep:	01.20.20 13.00	Basis:	Wet Weight
Seq Number:	3113870				

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00861	0.0190	0.00861	mg/kg	01.20.20 22.35	U	1
Toluene	108-88-3	<0.00446	0.0190	0.00446	mg/kg	01.20.20 22.35	U	1
Ethylbenzene	100-41-4	<0.00587	0.0190	0.00587	mg/kg	01.20.20 22.35	U	1
m,p-Xylenes	179601-23-1	<0.00650	0.0381	0.00650	mg/kg	01.20.20 22.35	U	1
o-Xylene	95-47-6	<0.00650	0.0190	0.00650	mg/kg	01.20.20 22.35	U	1
Total Xylenes	1330-20-7	<0.00650	0.0190	0.00650	mg/kg	01.20.20 22.35	U	1
Total BTEX		<0.00446	0.0190	0.00446	mg/kg	01.20.20 22.35	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	104	%	68-120	01.20.20 22.35	
a,a,a-Trifluorotoluene	98-08-8	123	%	71-121	01.20.20 22.35	**

Certificate of Analytical Results 649282

Terracon-Lubbock, Lubbock, TX

Aikman SWD

Sample Id:	**HA-1 1 (1.5-2)**	Matrix:	Soil	Date Received:	01.16.20 12.25
Lab Sample Id:	649282-002	Date Collected:	01.14.20 10.05	Sample Depth:	1.5 - 2 ft
Analytical Method:	TPH GRO by EPA 8015 Mod.			Prep Method:	SW5030B
Tech:	MIT			% Moisture:	
Analyst:	MIT	Date Prep:	01.20.20 13.00	Basis:	Wet Weight
Seq Number:	3113871				

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
TPH-GRO	8006-61-9	<0.258	3.81	0.258	mg/kg	01.20.20 22.35	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	89	%	76-123	01.20.20 22.35	
a,a,a-Trifluorotoluene	98-08-8	98	%	69-120	01.20.20 22.35	

Certificate of Analytical Results 649282

Terracon-Lubbock, Lubbock, TX

Aikman SWD

Sample Id: **HA-1 1 (3.5-4)** Matrix: Soil Date Received:01.16.20 12.25

Lab Sample Id: 649282-003 Date Collected: 01.14.20 10.10 Sample Depth: 3.5 - 4 ft

Analytical Method: Chloride by EPA 300 Prep Method: E300P

Tech: JYM % Moisture:

Analyst: JYM Date Prep: 01.17.20 10.50 Basis: Wet Weight

Seq Number: 3113663 SUB: T104704215-19-30

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**33.9**	10.1	0.358	mg/kg	01.17.20 14.18		1

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

Tech: MIT % Moisture:

Analyst: MIT Date Prep: 01.20.20 13.00 Basis: Wet Weight

Seq Number: 3113880

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Diesel Range Organics (DRO)	C10C28DRO	<7.42	24.8	7.42	mg/kg	01.20.20 22.49	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<7.42	24.8	7.42	mg/kg	01.20.20 22.49	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
Tricosane	638-67-5	117	%	65-144	01.20.20 22.49	
n-Triacontane	638-68-6	139	%	46-152	01.20.20 22.49	

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

Tech: MIT % Moisture:

Analyst: MIT Date Prep: 01.20.20 13.00 Basis: Wet Weight

Seq Number: 3113870

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00797	0.0176	0.00797	mg/kg	01.20.20 22.59	U	1
Toluene	108-88-3	<0.00413	0.0176	0.00413	mg/kg	01.20.20 22.59	U	1
Ethylbenzene	100-41-4	<0.00543	0.0176	0.00543	mg/kg	01.20.20 22.59	U	1
m,p-Xylenes	179601-23-1	<0.00601	0.0353	0.00601	mg/kg	01.20.20 22.59	U	1
o-Xylene	95-47-6	<0.00601	0.0176	0.00601	mg/kg	01.20.20 22.59	U	1
Total Xylenes	1330-20-7	<0.00601	0.0176	0.00601	mg/kg	01.20.20 22.59	U	1
Total BTEX		<0.00413	0.0176	0.00413	mg/kg	01.20.20 22.59	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	104	%	68-120	01.20.20 22.59	
a,a,a-Trifluorotoluene	98-08-8	123	%	71-121	01.20.20 22.59	**

Certificate of Analytical Results 649282

Terracon-Lubbock, Lubbock, TX

Aikman SWD

Sample Id:	**HA-1 1 (3.5-4)**	Matrix:	Soil	Date Received:	01.16.20 12.25
Lab Sample Id:	649282-003	Date Collected:	01.14.20 10.10	Sample Depth:	3.5 - 4 ft
Analytical Method:	TPH GRO by EPA 8015 Mod.			Prep Method:	SW5030B
Tech:	MIT			% Moisture:	
Analyst:	MIT	Date Prep:	01.20.20 13.00	Basis:	Wet Weight
Seq Number:	3113871				

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
TPH-GRO	8006-61-9	<0.239	3.53	0.239	mg/kg	01.20.20 22.59	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	88	%	76-123	01.20.20 22.59	
a,a,a-Trifluorotoluene	98-08-8	98	%	69-120	01.20.20 22.59	

Certificate of Analytical Results 649282

Terracon-Lubbock, Lubbock, TX

Aikman SWD

Sample Id:	**HA-2 1 (1.5-2)**	Matrix:	Soil	Date Received:	01.16.20 12.25
Lab Sample Id:	649282-004	Date Collected:	01.14.20 10.15	Sample Depth:	1.5 - 2 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	JYM			% Moisture:	
Analyst:	JYM	Date Prep:	01.17.20 10.50	Basis:	Wet Weight
Seq Number:	3113663			SUB:	T104704215-19-30

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**4160**	98.8	3.50	mg/kg	01.17.20 14.26		10

Analytical Method:	DRO-ORO By SW8015B			Prep Method:	SW8015P
Tech:	MIT			% Moisture:	
Analyst:	MIT	Date Prep:	01.20.20 13.00	Basis:	Wet Weight
Seq Number:	3113880				

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Diesel Range Organics (DRO)	C10C28DRO	<7.42	24.8	7.42	mg/kg	01.20.20 23.23	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<7.42	24.8	7.42	mg/kg	01.20.20 23.23	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
Tricosane	638-67-5	119	%	65-144	01.20.20 23.23	
n-Triacontane	638-68-6	137	%	46-152	01.20.20 23.23	

Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MIT			% Moisture:	
Analyst:	MIT	Date Prep:	01.20.20 13.00	Basis:	Wet Weight
Seq Number:	3113870				

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00893	0.0198	0.00893	mg/kg	01.20.20 23.22	U	1
Toluene	108-88-3	<0.00462	0.0198	0.00462	mg/kg	01.20.20 23.22	U	1
Ethylbenzene	100-41-4	<0.00609	0.0198	0.00609	mg/kg	01.20.20 23.22	U	1
m,p-Xylenes	179601-23-1	<0.00674	0.0395	0.00674	mg/kg	01.20.20 23.22	U	1
o-Xylene	95-47-6	<0.00674	0.0198	0.00674	mg/kg	01.20.20 23.22	U	1
Total Xylenes	1330-20-7	<0.00674	0.0198	0.00674	mg/kg	01.20.20 23.22	U	1
Total BTEX		<0.00462	0.0198	0.00462	mg/kg	01.20.20 23.22	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	101	%	68-120	01.20.20 23.22	
a,a,a-Trifluorotoluene	98-08-8	121	%	71-121	01.20.20 23.22	

Certificate of Analytical Results 649282

Terracon-Lubbock, Lubbock, TX

Aikman SWD

Sample Id:	**HA-2 1 (1.5-2)**	Matrix:	Soil	Date Received:	01.16.20 12.25
Lab Sample Id:	649282-004	Date Collected:	01.14.20 10.15	Sample Depth:	1.5 - 2 ft
Analytical Method:	TPH GRO by EPA 8015 Mod.			Prep Method:	SW5030B
Tech:	MIT			% Moisture:	
Analyst:	MIT	Date Prep:	01.20.20 13.00	Basis:	Wet Weight
Seq Number:	3113871				

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
TPH-GRO	8006-61-9	<0.268	3.95	0.268	mg/kg	01.20.20 23.22	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	86	%	76-123	01.20.20 23.22	
a,a,a-Trifluorotoluene	98-08-8	96	%	69-120	01.20.20 23.22	

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Terracon-Lubbock, Lubbock, TX

Aikman SWD

Sample Id:	**HA-2 1 (3.5-4)**	Matrix:	Soil	Date Received:	01.16.20 12.25
Lab Sample Id:	649282-005	Date Collected:	01.14.20 10.20	Sample Depth:	3.5 - 4 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	JYM			% Moisture:	
Analyst:	JYM	Date Prep:	01.17.20 10.50	Basis:	Wet Weight
Seq Number:	3113663			SUB:	T104704215-19-30

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**70.2**	9.84	0.348	mg/kg	01.17.20 15.46		1

Analytical Method:	DRO-ORO By SW8015B			Prep Method:	SW8015P
Tech:	MIT			% Moisture:	
Analyst:	MIT	Date Prep:	01.20.20 13.00	Basis:	Wet Weight
Seq Number:	3113880				

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Diesel Range Organics (DRO)	C10C28DRO	**30.1**	25.0	7.47	mg/kg	01.20.20 23.56		1
Oil Range Hydrocarbons (ORO)	PHCG2835	<7.47	25.0	7.47	mg/kg	01.20.20 23.56	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
Tricosane	638-67-5	132	%	65-144	01.20.20 23.56	
n-Triacontane	638-68-6	145	%	46-152	01.20.20 23.56	

Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MIT			% Moisture:	
Analyst:	MIT	Date Prep:	01.20.20 13.00	Basis:	Wet Weight
Seq Number:	3113870				

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00825	0.0182	0.00825	mg/kg	01.20.20 23.46	U	1
Toluene	108-88-3	<0.00427	0.0182	0.00427	mg/kg	01.20.20 23.46	U	1
Ethylbenzene	100-41-4	<0.00562	0.0182	0.00562	mg/kg	01.20.20 23.46	U	1
m,p-Xylenes	179601-23-1	<0.00622	0.0365	0.00622	mg/kg	01.20.20 23.46	U	1
o-Xylene	95-47-6	<0.00622	0.0182	0.00622	mg/kg	01.20.20 23.46	U	1
Total Xylenes	1330-20-7	<0.00622	0.0182	0.00622	mg/kg	01.20.20 23.46	U	1
Total BTEX		<0.00427	0.0182	0.00427	mg/kg	01.20.20 23.46	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	104	%	68-120	01.20.20 23.46	
a,a,a-Trifluorotoluene	98-08-8	122	%	71-121	01.20.20 23.46	**

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Terracon-Lubbock, Lubbock, TX

Aikman SWD

Sample Id:	**HA-2 1 (3.5-4)**	Matrix:	Soil	Date Received:	01.16.20 12.25
Lab Sample Id:	649282-005	Date Collected:	01.14.20 10.20	Sample Depth:	3.5 - 4 ft
Analytical Method:	TPH GRO by EPA 8015 Mod.			Prep Method:	SW5030B
Tech:	MIT			% Moisture:	
Analyst:	MIT	Date Prep:	01.20.20 13.00	Basis:	Wet Weight
Seq Number:	3113871				

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
TPH-GRO	8006-61-9	<0.247	3.65	0.247	mg/kg	01.20.20 23.46	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	88	%	76-123	01.20.20 23.46	
a,a,a-Trifluorotoluene	98-08-8	97	%	69-120	01.20.20 23.46	

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Terracon-Lubbock, Lubbock, TX

Aikman SWD

Sample Id: **HA-3 1 (1.5-2)** Matrix: Soil Date Received:01.16.20 12.25

Lab Sample Id: 649282-006 Date Collected: 01.14.20 10.25 Sample Depth: 1.5 - 2 ft

Analytical Method: Chloride by EPA 300 Prep Method: E300P

Tech: JYM % Moisture:

Analyst: JYM Date Prep: 01.17.20 10.50 Basis: Wet Weight

Seq Number: 3113663 SUB: T104704215-19-30

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**149**	9.98	0.353	mg/kg	01.17.20 14.44		1

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

Tech: MIT % Moisture:

Analyst: MIT Date Prep: 01.20.20 13.00 Basis: Wet Weight

Seq Number: 3113880

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Diesel Range Organics (DRO)	C10C28DRO	**8.79**	24.9	7.45	mg/kg	01.21.20 00.30	J	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<7.45	24.9	7.45	mg/kg	01.21.20 00.30	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
Tricosane	638-67-5	119	%	65-144	01.21.20 00.30	
n-Triacontane	638-68-6	140	%	46-152	01.21.20 00.30	

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

Tech: MIT % Moisture:

Analyst: MIT Date Prep: 01.20.20 13.00 Basis: Wet Weight

Seq Number: 3113870

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00868	0.0192	0.00868	mg/kg	01.21.20 00.09	U	1
Toluene	108-88-3	<0.00449	0.0192	0.00449	mg/kg	01.21.20 00.09	U	1
Ethylbenzene	100-41-4	<0.00591	0.0192	0.00591	mg/kg	01.21.20 00.09	U	1
m,p-Xylenes	179601-23-1	<0.00655	0.0384	0.00655	mg/kg	01.21.20 00.09	U	1
o-Xylene	95-47-6	<0.00655	0.0192	0.00655	mg/kg	01.21.20 00.09	U	1
Total Xylenes	1330-20-7	<0.00655	0.0192	0.00655	mg/kg	01.21.20 00.09	U	1
Total BTEX		<0.00449	0.0192	0.00449	mg/kg	01.21.20 00.09	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	102	%	68-120	01.21.20 00.09	
a,a,a-Trifluorotoluene	98-08-8	109	%	71-121	01.21.20 00.09	

Certificate of Analytical Results 649282

Terracon-Lubbock, Lubbock, TX

Aikman SWD

Sample Id:	**HA-3 1 (1.5-2)**	Matrix:	Soil	Date Received:	01.16.20 12.25
Lab Sample Id:	649282-006	Date Collected:	01.14.20 10.25	Sample Depth:	1.5 - 2 ft
Analytical Method:	TPH GRO by EPA 8015 Mod.			Prep Method:	SW5030B
Tech:	MIT			% Moisture:	
Analyst:	MIT	Date Prep:	01.20.20 13.00	Basis:	Wet Weight
Seq Number:	3113871				

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
TPH-GRO	8006-61-9	<0.260	3.84	0.260	mg/kg	01.21.20 00.09	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	86	%	76-123	01.21.20 00.09	
a,a,a-Trifluorotoluene	98-08-8	86	%	69-120	01.21.20 00.09	

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Terracon-Lubbock, Lubbock, TX

Aikman SWD

Sample Id: **HA-3 1 (3.5-4)** Matrix: Soil Date Received:01.16.20 12.25

Lab Sample Id: 649282-007 Date Collected: 01.14.20 10.30 Sample Depth: 3.5 - 4 ft

Analytical Method: Chloride by EPA 300 Prep Method: E300P

Tech: JYM % Moisture:

Analyst: JYM Date Prep: 01.17.20 10.50 Basis: Wet Weight

Seq Number: 3113663 SUB: T104704215-19-30

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**1090**	9.84	0.348	mg/kg	01.17.20 15.11		1

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

Tech: MIT % Moisture:

Analyst: MIT Date Prep: 01.20.20 13.00 Basis: Wet Weight

Seq Number: 3113880

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Diesel Range Organics (DRO)	C10C28DRO	<7.49	25.1	7.49	mg/kg	01.20.20 19.23	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<7.49	25.1	7.49	mg/kg	01.20.20 19.23	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
Tricosane	638-67-5	120	%	65-144	01.20.20 19.23	
n-Triacontane	638-68-6	137	%	46-152	01.20.20 19.23	

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

Tech: MIT % Moisture:

Analyst: MIT Date Prep: 01.20.20 13.00 Basis: Wet Weight

Seq Number: 3113870

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00831	0.0184	0.00831	mg/kg	01.20.20 19.50	U	1
Toluene	108-88-3	<0.00430	0.0184	0.00430	mg/kg	01.20.20 19.50	U	1
Ethylbenzene	100-41-4	<0.00566	0.0184	0.00566	mg/kg	01.20.20 19.50	U	1
m,p-Xylenes	179601-23-1	<0.00627	0.0368	0.00627	mg/kg	01.20.20 19.50	U	1
o-Xylene	95-47-6	<0.00627	0.0184	0.00627	mg/kg	01.20.20 19.50	U	1
Total Xylenes	1330-20-7	<0.00627	0.0184	0.00627	mg/kg	01.20.20 19.50	U	1
Total BTEX		<0.00430	0.0184	0.00430	mg/kg	01.20.20 19.50	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	85	%	68-120	01.20.20 19.50	
a,a,a-Trifluorotoluene	98-08-8	93	%	71-121	01.20.20 19.50	

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Terracon-Lubbock, Lubbock, TX

Aikman SWD

Sample Id:	**HA-3 1 (3.5-4)**	Matrix:	Soil	Date Received:	01.16.20 12.25
Lab Sample Id:	649282-007	Date Collected:	01.14.20 10.30	Sample Depth:	3.5 - 4 ft
Analytical Method:	TPH GRO by EPA 8015 Mod.			Prep Method:	SW5030B
Tech:	MIT			% Moisture:	
Analyst:	MIT	Date Prep:	01.20.20 13.00	Basis:	Wet Weight
Seq Number:	3113871				

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
TPH-GRO	8006-61-9	<0.249	3.68	0.249	mg/kg	01.20.20 19.50	UF	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	72	%	76-123	01.20.20 19.50	**
a,a,a-Trifluorotoluene	98-08-8	73	%	69-120	01.20.20 19.50	

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Terracon-Lubbock, Lubbock, TX

Aikman SWD

Sample Id:	**HA-4 1 (0.5-1)**	Matrix:	Soil	Date Received:	01.16.20 12.25
Lab Sample Id:	649282-008	Date Collected:	01.14.20 10.35	Sample Depth:	0.5 - 1 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	JYM			% Moisture:	
Analyst:	JYM	Date Prep:	01.17.20 10.50	Basis:	Wet Weight
Seq Number:	3113663			SUB:	T104704215-19-30

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**6830**	102	3.60	mg/kg	01.17.20 15.19		10

Analytical Method:	DRO-ORO By SW8015B			Prep Method:	SW8015P
Tech:	MIT			% Moisture:	
Analyst:	MIT	Date Prep:	01.20.20 13.00	Basis:	Wet Weight
Seq Number:	3113880				

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Diesel Range Organics (DRO)	C10C28DRO	<7.52	25.1	7.52	mg/kg	01.21.20 01.03	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<7.52	25.1	7.52	mg/kg	01.21.20 01.03	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
Tricosane	638-67-5	121	%	65-144	01.21.20 01.03	
n-Triacontane	638-68-6	140	%	46-152	01.21.20 01.03	

Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MIT			% Moisture:	
Analyst:	MIT	Date Prep:	01.20.20 13.00	Basis:	Wet Weight
Seq Number:	3113870				

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00858	0.0190	0.00858	mg/kg	01.21.20 00.34	U	1
Toluene	108-88-3	<0.00444	0.0190	0.00444	mg/kg	01.21.20 00.34	U	1
Ethylbenzene	100-41-4	<0.00584	0.0190	0.00584	mg/kg	01.21.20 00.34	U	1
m,p-Xylenes	179601-23-1	<0.00647	0.0380	0.00647	mg/kg	01.21.20 00.34	U	1
o-Xylene	95-47-6	<0.00647	0.0190	0.00647	mg/kg	01.21.20 00.34	U	1
Total Xylenes	1330-20-7	<0.00647	0.0190	0.00647	mg/kg	01.21.20 00.34	U	1
Total BTEX		<0.00444	0.0190	0.00444	mg/kg	01.21.20 00.34	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	108	%	68-120	01.21.20 00.34	
a,a,a-Trifluorotoluene	98-08-8	119	%	71-121	01.21.20 00.34	

Certificate of Analytical Results 649282

Terracon-Lubbock, Lubbock, TX

Aikman SWD

Sample Id:	**HA-4 1 (0.5-1)**	Matrix:	Soil	Date Received:	01.16.20 12.25
Lab Sample Id:	649282-008	Date Collected:	01.14.20 10.35	Sample Depth:	0.5 - 1 ft
Analytical Method:	TPH GRO by EPA 8015 Mod.			Prep Method:	SW5030B
Tech:	MIT			% Moisture:	
Analyst:	MIT	Date Prep:	01.20.20 13.00	Basis:	Wet Weight
Seq Number:	3113871				

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
TPH-GRO	8006-61-9	**0.313**	3.80	0.257	mg/kg	01.21.20 00.34	J	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	92	%	76-123	01.21.20 00.34	
a,a,a-Trifluorotoluene	98-08-8	94	%	69-120	01.21.20 00.34	

Certificate of Analytical Results 649282

Terracon-Lubbock, Lubbock, TX

Aikman SWD

Sample Id: **HA-4 1 (1.5-2)** Matrix: Soil Date Received:01.16.20 12.25

Lab Sample Id: 649282-009 Date Collected: 01.14.20 10.40 Sample Depth: 1.5 - 2 ft

Analytical Method: Chloride by EPA 300 Prep Method: E300P

Tech: JYM % Moisture:

Analyst: JYM Date Prep: 01.17.20 10.50 Basis: Wet Weight

Seq Number: 3113663 SUB: T104704215-19-30

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**544**	101	3.58	mg/kg	01.17.20 15.55		10

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

Tech: MIT % Moisture:

Analyst: MIT Date Prep: 01.20.20 13.00 Basis: Wet Weight

Seq Number: 3113880

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Diesel Range Organics (DRO)	C10C28DRO	<7.47	25.0	7.47	mg/kg	01.21.20 01.37	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<7.47	25.0	7.47	mg/kg	01.21.20 01.37	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
Tricosane	638-67-5	119	%	65-144	01.21.20 01.37	
n-Triacontane	638-68-6	138	%	46-152	01.21.20 01.37	

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

Tech: MIT % Moisture:

Analyst: MIT Date Prep: 01.20.20 13.00 Basis: Wet Weight

Seq Number: 3113870

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00871	0.0193	0.00871	mg/kg	01.21.20 00.57	U	1
Toluene	108-88-3	<0.00451	0.0193	0.00451	mg/kg	01.21.20 00.57	U	1
Ethylbenzene	100-41-4	<0.00593	0.0193	0.00593	mg/kg	01.21.20 00.57	U	1
m,p-Xylenes	179601-23-1	<0.00657	0.0385	0.00657	mg/kg	01.21.20 00.57	U	1
o-Xylene	95-47-6	<0.00657	0.0193	0.00657	mg/kg	01.21.20 00.57	U	1
Total Xylenes	1330-20-7	<0.00657	0.0193	0.00657	mg/kg	01.21.20 00.57	U	1
Total BTEX		<0.00451	0.0193	0.00451	mg/kg	01.21.20 00.57	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	82	%	68-120	01.21.20 00.57	
a,a,a-Trifluorotoluene	98-08-8	92	%	71-121	01.21.20 00.57	

Certificate of Analytical Results 649282

Terracon-Lubbock, Lubbock, TX

Aikman SWD

Sample Id:	**HA-4 1 (1.5-2)**	Matrix:	Soil	Date Received:	01.16.20 12.25
Lab Sample Id:	649282-009	Date Collected:	01.14.20 10.40	Sample Depth:	1.5 - 2 ft
Analytical Method:	TPH GRO by EPA 8015 Mod.			Prep Method:	SW5030B
Tech:	MIT			% Moisture:	
Analyst:	MIT	Date Prep:	01.20.20 13.00	Basis:	Wet Weight
Seq Number:	3113871				

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
TPH-GRO	8006-61-9	<0.261	3.85	0.261	mg/kg	01.21.20 00.57	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	70	%	76-123	01.21.20 00.57	**
a,a,a-Trifluorotoluene	98-08-8	73	%	69-120	01.21.20 00.57	

Flagging Criteria

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

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

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

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

F RPD exceeded lab control limits.

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

U Analyte was not detected.

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

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

K Sample analyzed outside of recommended hold time.

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

** Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit.

RL Reporting Limit

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

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

DL Method Detection Limit

NC Non-Calculable

SMP Client Sample **BLK** Method Blank

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

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

+ NELAC certification not offered for this compound.

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

QC Summary 649282

Terracon-Lubbock

Aikman SWD

Analytical Method: Chloride by EPA 300 — Prep Method: SW9056P
Seq Number: 3113663 — Matrix: Solid — Date Prep: 01.17.20
MB Sample Id: 7694586-1-BLK — LCS Sample Id: 7694586-1-BKS — LCSD Sample Id: 7694586-1-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	103	103	103	103	80-120	0	20	mg/kg	01.17.20 12:23	

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3113663 — Matrix: Soil — Date Prep: 01.17.20
Parent Sample Id: 649282-006 — MS Sample Id: 649282-006 S — MSD Sample Id: 649282-006 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	149	100	244	95	243	94	80-120	0	20	mg/kg	01.17.20 14:53	

Analytical Method: Chloride by EPA 300 — Prep Method: SW9056P
Seq Number: 3113663 — Matrix: Soil — Date Prep: 01.17.20
Parent Sample Id: 649369-001 — MS Sample Id: 649369-001 S — MSD Sample Id: 649369-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	862	99.6	940	78	946	84	80-120	1	20	mg/kg	01.17.20 12:49	X

Analytical Method: DRO-ORO By SW8015B — Prep Method: SW8015P
Seq Number: 3113880 — Matrix: Solid — Date Prep: 01.20.20
MB Sample Id: 7694811-1-BLK — LCS Sample Id: 7694811-1-BKS — LCSD Sample Id: 7694811-1-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	110	110	106	106	63-139	4	20	mg/kg	01.20.20 16:20	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
Tricosane	105		104		100		65-144	%	01.20.20 16:20
n-Triacontane	123		120		117		46-152	%	01.20.20 16:20

Analytical Method: DRO-ORO By SW8015B — Prep Method: SW8015P
Seq Number: 3113880 — Matrix: Solid — Date Prep: 01.20.20
MB Sample Id: 7694811-1-BLK

Parameter	MB Result	Units	Analysis Date	Flag
Oil Range Hydrocarbons (ORO)	<7.48	mg/kg	01.20.20 18:49	

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

QC Summary 649282

Terracon-Lubbock

Aikman SWD

Analytical Method: **DRO-ORO By SW8015B** Prep Method: SW8015P
Seq Number: 3113880 Matrix: Soil Date Prep: 01.20.20
Parent Sample Id: 649282-007 MS Sample Id: 649282-007 S MSD Sample Id: 649282-007 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)	<7.48	100	82.0	82	73.2	72	63-139	11	20	mg/kg	01.20.20 19:57	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
Tricosane	124		115		65-144	%	01.20.20 19:57
n-Triacontane	138		132		46-152	%	01.20.20 19:57

Analytical Method: **BTEX by EPA 8021B** Prep Method: SW5030B
Seq Number: 3113870 Matrix: Solid Date Prep: 01.20.20
MB Sample Id: 7694808-1-BLK LCS Sample Id: 7694808-1-BKS LCSD Sample Id: 7694808-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00904	2.00	2.01	101	1.95	98	55-120	3	20	mg/kg	01.20.20 17:02	
Toluene	<0.00468	2.00	1.96	98	1.87	94	77-120	5	20	mg/kg	01.20.20 17:02	
Ethylbenzene	<0.00616	2.00	1.93	97	1.86	93	77-120	4	20	mg/kg	01.20.20 17:02	
m,p-Xylenes	<0.00682	4.00	3.83	96	3.73	93	78-120	3	20	mg/kg	01.20.20 17:02	
o-Xylene	<0.00682	2.00	1.95	98	1.91	96	78-120	2	20	mg/kg	01.20.20 17:02	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
4-Bromofluorobenzene	107		114		110		68-120	%	01.20.20 17:02
a,a,a-Trifluorotoluene	122	**	119		115		71-121	%	01.20.20 17:02

Analytical Method: **BTEX by EPA 8021B** Prep Method: SW5030B
Seq Number: 3113870 Matrix: Soil Date Prep: 01.20.20
Parent Sample Id: 649282-007 MS Sample Id: 649282-007 S MSD Sample Id: 649282-007 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00886	1.96	1.90	97	1.80	97	54-120	5	25	mg/kg	01.20.20 20:13	
Toluene	<0.00459	1.96	1.91	97	1.88	101	57-120	2	25	mg/kg	01.20.20 20:13	
Ethylbenzene	<0.00604	1.96	1.90	97	1.88	101	58-131	1	25	mg/kg	01.20.20 20:13	
m,p-Xylenes	<0.00669	3.92	3.76	96	3.72	100	62-124	1	25	mg/kg	01.20.20 20:13	
o-Xylene	<0.00669	1.96	1.85	94	1.82	98	62-124	2	25	mg/kg	01.20.20 20:13	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
4-Bromofluorobenzene	109		85		68-120	%	01.20.20 20:13
a,a,a-Trifluorotoluene	124	**	98		71-121	%	01.20.20 20:13

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

QC Summary 649282

Terracon-Lubbock

Aikman SWD

Analytical Method: **TPH GRO by EPA 8015 Mod.** Prep Method: SW5030B
Seq Number: 3113871 Matrix: Solid Date Prep: 01.20.20
MB Sample Id: 7694809-1-BLK LCS Sample Id: 7694809-1-BKS LCSD Sample Id: 7694809-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
TPH-GRO	<0.271	20.0	17.1	86	18.5	93	35-129	8	20	mg/kg	01.20.20 17:50	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
4-Bromofluorobenzene	90		124	**	128	**	76-123	%	01.20.20 17:50
a,a,a-Trifluorotoluene	97		95		93		69-120	%	01.20.20 17:50

Analytical Method: **TPH GRO by EPA 8015 Mod.** Prep Method: SW5030B
Seq Number: 3113871 Matrix: Soil Date Prep: 01.20.20
Parent Sample Id: 649282-007 MS Sample Id: 649282-007 S MSD Sample Id: 649282-007 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
TPH-GRO	<0.262	19.3	16.0	83	20.4	107	35-129	24	20	mg/kg	01.20.20 21:01	F

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
4-Bromofluorobenzene	103		112		76-123	%	01.20.20 21:01
a,a,a-Trifluorotoluene	81		91		69-120	%	01.20.20 21:01

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

Released to Imaging: 8/29/2023 1:29:02 PM
Received by OCD: 4/10/2023 1:07:45 PM

649282

649282

CHAIN OF CUSTODY RECORD

Terracon

Laboratory: Xenco
Address: 6701 Aberdeen
Lubbock, Texas 79424

Office Location: Lubbock
Phone:
Project Manager: Joseph Guesnier
Contact: Joseph Guesnier (806-544-9276)
Sampler's Name: Bryant McBrayer
SRS #:
Sampler's Signature:

ANALYSIS REQUESTED

LAB USE ONLY
DUE DATE: TR-4 +0.1
TEMP OF COOLER WHEN RECEIVED (°C): 1.4/1.5

Page 1 of 1

Project Number: AR197355
Project Name: Aikman SWD

Matrix	Date	Time	Comp	Grab	Identifying Marks of Sample(s)	Start Depth	End Depth	No. Type of Containers: 2 oz Glass	4 oz Glass	5035 kit	40 ml VOA	BTEX (EPA Method 8021B)	TPH Extended 8015	Chloride (EPA Method 300)	Hold				Lab Sample ID
S	1/14/2020	10:00	X		SP-1	-	-		X			X	X	X					
S	1/14/2020	10:05		X	HA-1 (1.5-2)	1.5'	2'		X			X	X	X					
S	1/14/2020	10:10		X	HA-1 (3.5-4)	3.5'	4'		X			X	X	X					
S	1/14/2020	10:15		X	HA-2 (1.5-2)	1.5'	2'		X			X	X	X					
S	1/14/2020	10:20		X	HA-2 (3.5-4)	3.5'	4'		X			X	X	X					
S	1/14/2020	10:25		X	HA-3 (1.5-2)	1.5'	2'		X			X	X	X					
S	1/14/2020	10:30		X	HA-3 (3.5-4)	3.5'	4'		X			X	X	X					
S	1/14/2020	10:35		X	HA-4 (0.5-1)	0.5'	1'		X			X	X	X					
S	1/14/2020	10:40		X	HA-4 (1.5-2)	1.5'	2'		X			X	X	X					

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

TRRP Laboratory Review Checklist ☐ Yes ☐ No

Relinquished by (Signature)	Date	Time	Received by (Signature)	Date	Time
[signature]	1/16/2020	11:00	Brenda Ward		

NOTES: Client:

e-mail results to:
greg.pawlak@terracon.com
erin.loyd@terracon.com
jrguesnier@terracon.com

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

Inter-Office Shipment

IOS Number : 56251

Date/Time: 01.16.2020
Lab# From: **Lubbock**
Lab# To: **Houston**

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

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

Sample Id	Matrix	Client Sample Id	Sample Collection	Method	Method Name	Lab Due	HT Due	PM	Analytes	Sign
649282-001	S	SP-1	01.14.2020 10:00	E300_CL	Chloride by EPA 300	01.22.2020	02.11.2020	JKR	CL	
649282-002	S	HA-1 1 (1.5-2)	01.14.2020 10:05	E300_CL	Chloride by EPA 300	01.22.2020	02.11.2020	JKR	CL	
649282-003	S	HA-1 1 (3.5-4)	01.14.2020 10:10	E300_CL	Chloride by EPA 300	01.22.2020	02.11.2020	JKR	CL	
649282-004	S	HA-2 1 (1.5-2)	01.14.2020 10:15	E300_CL	Chloride by EPA 300	01.22.2020	02.11.2020	JKR	CL	
649282-005	S	HA-2 1 (3.5-4)	01.14.2020 10:20	E300_CL	Chloride by EPA 300	01.22.2020	02.11.2020	JKR	CL	
649282-006	S	HA-3 1 (1.5-2)	01.14.2020 10:25	E300_CL	Chloride by EPA 300	01.22.2020	02.11.2020	JKR	CL	
649282-007	S	HA-3 1 (3.5-4)	01.14.2020 10:30	E300_CL	Chloride by EPA 300	01.22.2020	02.11.2020	JKR	CL	
649282-008	S	HA-4 1 (0.5-1)	01.14.2020 10:35	E300_CL	Chloride by EPA 300	01.22.2020	02.11.2020	JKR	CL	
649282-009	S	HA-4 1 (1.5-2)	01.14.2020 10:40	E300_CL	Chloride by EPA 300	01.22.2020	02.11.2020	JKR	CL	

Inter Office Shipment or Sample Comments:

Relinquished By: Brenda Ward
Brenda Ward

Date Relinquished: 01.16.2020

Received By:

Date Received:

Cooler Temperature:

XENCO Laboratories

Inter Office Report- Sample Receipt Checklist

Sent To: Houston

IOS #: 56251

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

Sent By: Brenda Ward **Date Sent:** 01.16.2020 01.43 PM

Received By: Abdhija Saidurga **Date Received:** 01.17.2020 10.00 AM

Sample Receipt Checklist		Comments
#1 *Temperature of cooler(s)?	1.9	
#2 *Shipping container in good condition?	**Yes**	
#3 *Samples received with appropriate temperature?	**Yes**	
#4 *Custody Seals intact on shipping container/ cooler?	**N/A**	
#5 *Custody Seals Signed and dated for Containers/coolers	**N/A**	
#6 *IOS present?	**Yes**	
#7 Any missing/extra samples?	**No**	
#8 IOS agrees with sample label(s)/matrix?	**Yes**	
#9 Sample matrix/ properties agree with IOS?	**Yes**	
#10 Samples in proper container/ bottle?	**Yes**	
#11 Samples properly preserved?	**Yes**	
#12 Sample container(s) intact?	**Yes**	
#13 Sufficient sample amount for indicated test(s)?	**Yes**	
#14 All samples received within hold time?	**Yes**	

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

NonConformance:

Corrective Action Taken:

Nonconformance Documentation

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

Checklist reviewed by: Abdhija Saidurga Date: 01.17.2020

Abdhija Saidurga

XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In

Client: Terracon-Lubbock

Date/ Time Received: 01.16.2020 12.25.18 PM

Work Order #: 649282

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

Temperature Measuring device used :

Sample Receipt Checklist		Comments
#1 *Temperature of cooler(s)?	1.5	
#2 *Shipping container in good condition?	**Yes**	
#3 *Samples received on ice?	**Yes**	
#4 *Custody Seals intact on shipping container/ cooler?	**N/A**	
#5 Custody Seals intact on sample bottles?	**N/A**	
#6*Custody Seals Signed and dated?	**N/A**	
#7 *Chain of Custody present?	**Yes**	
#8 Any missing/extra samples?	**No**	
#9 Chain of Custody signed when relinquished/ received?	**Yes**	
#10 Chain of Custody agrees with sample labels/matrix?	**Yes**	
#11 Container label(s) legible and intact?	**Yes**	
#12 Samples in proper container/ bottle?	**Yes**	
#13 Samples properly preserved?	**Yes**	
#14 Sample container(s) intact?	**Yes**	
#15 Sufficient sample amount for indicated test(s)?	**Yes**	
#16 All samples received within hold time?	**Yes**	
#17 Subcontract of sample(s)?	**Yes**	Chlorides sent to Stafford
#18 Water VOC samples have zero headspace?	**N/A**	

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

Analyst: PH Device/Lot#:

Checklist completed by: Brenda Ward Date: 01.16.2020
Brenda Ward

Checklist reviewed by: Jessica Kramer Date: 01.16.2020
Jessica Kramer

Certificate of Analysis Summary 652217

Terracon-Lubbock, Lubbock, TX

Project Name: Aikman SWD

Project Id: AR207018
Contact: Joseph Guesnier
Project Location:

Date Received in Lab: Wed Feb-12-20 04:45 pm
Report Date: 14-FEB-20
Project Manager: Jessica Kramer

Analysis Requested		652217-001		652217-002		652217-003		652217-004		652217-005		652217-006	
	Field Id:	SW-1 (0.5-1)		WW-1 (0.5-1)		NWT-1 (0.5-1)		NW-1 (0.5-1)		EW-1 (0.5-1)		SWT-1 (0.5-1)	
	Depth:	0.5-1 ft		0.5-1 ft		0.5-1 ft		0.5-1 ft		0.5-1 ft		0.5-1 ft	
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Feb-10-20 12:00		Feb-10-20 12:08		Feb-10-20 12:25		Feb-10-20 12:27		Feb-10-20 12:33		Feb-10-20 12:38	
BTEX by EPA 8021B	*Extracted:*	Feb-13-20 11:13		Feb-13-20 11:13		Feb-13-20 11:13		Feb-13-20 11:13		Feb-13-20 11:13		Feb-13-20 11:13	
	Analyzed:	Feb-13-20 22:11		Feb-14-20 00:36		Feb-14-20 01:00		Feb-14-20 01:25		Feb-14-20 01:49		Feb-14-20 02:13	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Benzene		<0.00888	0.0196	<0.0179	0.0396	<0.00888	0.0196	<0.0175	0.0386	<0.00783	0.0173	<0.00890	0.0197
Toluene		<0.00460	0.0196	<0.00927	0.0396	0.0177 J	0.0196	<0.00903	0.0386	<0.00406	0.0173	<0.00461	0.0197
Ethylbenzene		<0.00605	0.0196	<0.0122	0.0396	<0.00605	0.0196	<0.0119	0.0386	<0.00534	0.0173	<0.00606	0.0197
m,p-Xylenes		<0.00670	0.0393	<0.0135	0.0792	<0.00670	0.0393	<0.0132	0.0772	<0.00591	0.0347	<0.00671	0.0394
o-Xylene		<0.00670	0.0196	<0.0135	0.0396	<0.00670	0.0196	<0.0132	0.0386	<0.00591	0.0173	<0.00671	0.0197
Total Xylenes		<0.00670	0.0196	<0.0135	0.0396	<0.00670	0.0196	<0.0132	0.0386	<0.00591	0.0173	<0.00671	0.0197
Total BTEX		<0.00460	0.0196	<0.00927	0.0396	0.0177 J	0.0196	<0.00903	0.0386	<0.00406	0.0173	<0.00461	0.0197
Chloride by EPA 300	*Extracted:*	Feb-13-20 14:30		Feb-13-20 14:30		Feb-13-20 14:30		Feb-13-20 14:30		Feb-13-20 14:30		Feb-13-20 14:30	
	Analyzed:	Feb-13-20 16:19		Feb-13-20 17:08		Feb-13-20 17:33		Feb-13-20 17:58		Feb-13-20 18:23		Feb-13-20 19:00	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		3580 DX	250	4230 D	250	9510 D	1250	8520 D	1250	5520 D	1250	11000 DX	2500
DRO-ORO By SW8015B	*Extracted:*	Feb-13-20 12:00		Feb-13-20 12:00		Feb-13-20 12:00		Feb-13-20 12:00		Feb-13-20 12:00		Feb-13-20 12:00	
	Analyzed:	Feb-13-20 23:42		Feb-14-20 00:19		Feb-14-20 00:58		Feb-14-20 01:35		Feb-14-20 02:13		Feb-14-20 02:49	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Diesel Range Organics (DRO)		13.4 J	25.3	67.6	25.1	74.9	25.2	52.8	25.1	16.7 J	25.1	21.1 J	25.2
Oil Range Hydrocarbons (ORO)		<7.56	25.3	<7.50	25.1	<7.53	25.2	<7.52	25.1	<7.50	25.1	<7.53	25.2
TPH GRO by EPA 8015 Mod.	*Extracted:*	Feb-13-20 11:13		Feb-13-20 11:13		Feb-13-20 11:13		Feb-13-20 11:13		Feb-13-20 11:13		Feb-13-20 11:13	
	Analyzed:	Feb-13-20 22:11		Feb-14-20 00:36		Feb-14-20 01:00		Feb-14-20 01:25		Feb-14-20 01:49		Feb-14-20 02:13	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
TPH-GRO		2.79 J	3.93	3.46 J	7.92	0.752 J	3.93	1.07 J	7.72	2.32 J	3.47	0.780 J	3.94

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Version: 1.%

Jessica Kramer
Project Assistant

Final 1.000

Certificate of Analysis Summary 652217

Terracon-Lubbock, Lubbock, TX

Project Name: Aikman SWD

Project Id: AR207018
Contact: Joseph Guesnier
Project Location:

Date Received in Lab: Wed Feb-12-20 04:45 pm
Report Date: 14-FEB-20
Project Manager: Jessica Kramer

Analysis Requested		652217-007		652217-008		652217-009		652217-010		652217-011		652217-012	
	Field Id:	NEW-1 (0.5-1)		SEW-1 (0.5-1)		NWF-1 (1.5-2)		SWF-1 (1.5-2)		NEF-1 (1.5-2)		SEF-1 (1.5-2)	
	Depth:	0.5-1 ft		0.5-1 ft		1.5-2 ft		1.5-2 ft		1.5-2 ft		1.5-2 ft	
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Feb-10-20 12:47		Feb-10-20 12:56		Feb-10-20 13:04		Feb-10-20 13:13		Feb-10-20 13:21		Feb-10-20 13:29	
BTEX by EPA 8021B	Extracted:	Feb-13-20 11:13		Feb-13-20 11:13		Feb-13-20 11:13		Feb-13-20 11:13		Feb-13-20 11:13		Feb-13-20 11:13	
	Analyzed:	Feb-14-20 02:37		Feb-14-20 03:01		Feb-14-20 03:25		Feb-14-20 03:50		Feb-14-20 06:13		Feb-14-20 06:37	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Benzene		<0.00789	0.0175	<0.0178	0.0394	<0.0161	0.0357	<0.0181	0.0400	<0.0157	0.0348	<0.0164	0.0363
Toluene		<0.00408	0.0175	<0.00921	0.0394	<0.00836	0.0357	<0.00936	0.0400	<0.00814	0.0348	<0.00849	0.0363
Ethylbenzene		<0.00538	0.0175	<0.0121	0.0394	<0.0110	0.0357	<0.0123	0.0400	<0.0107	0.0348	<0.0112	0.0363
m,p-Xylenes		<0.00595	0.0349	<0.0134	0.0787	<0.0122	0.0714	<0.0136	0.0800	<0.0119	0.0696	<0.0124	0.0726
o-Xylene		<0.00595	0.0175	<0.0134	0.0394	<0.0122	0.0357	<0.0136	0.0400	<0.0119	0.0348	<0.0124	0.0363
Total Xylenes		<0.00595	0.0175	<0.0134	0.0394	<0.0122	0.0357	<0.0136	0.0400	<0.0119	0.0348	<0.0124	0.0363
Total BTEX		<0.00408	0.0175	<0.00921	0.0394	<0.00836	0.0357	<0.00936	0.0400	<0.00814	0.0348	<0.00849	0.0363
Chloride by EPA 300	Extracted:	Feb-13-20 14:30		Feb-13-20 14:30		Feb-13-20 14:30		Feb-13-20 14:30		Feb-13-20 14:30		Feb-13-20 14:30	
	Analyzed:	Feb-13-20 19:50		Feb-13-20 20:15		Feb-13-20 20:39		Feb-13-20 21:04		Feb-13-20 22:19		Feb-13-20 23:08	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		1580 D	250	5820 D	1250	7320 D	1250	6710 D	1250	6690 DX	1250	7260 D	1250
DRO-ORO By SW8015B	Extracted:	Feb-13-20 12:00		Feb-13-20 12:00		Feb-13-20 12:00		Feb-13-20 12:00		Feb-13-20 12:00		Feb-13-20 12:00	
	Analyzed:	Feb-14-20 03:29		Feb-14-20 04:06		Feb-14-20 04:43		Feb-14-20 05:21		Feb-14-20 05:59		Feb-14-20 06:35	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Diesel Range Organics (DRO)		<7.53	25.2	27.8	24.9	27.8	25.2	33.4	25.0	39.0	24.9	18.7 J	25.0
Oil Range Hydrocarbons (ORO)		<7.53	25.2	<7.44	24.9	<7.53	25.2	<7.49	25.0	<7.45	24.9	<7.47	25.0
TPH GRO by EPA 8015 Mod.	Extracted:	Feb-13-20 11:13		Feb-13-20 11:13		Feb-13-20 11:13		Feb-13-20 11:13		Feb-13-20 11:13		Feb-13-20 11:13	
	Analyzed:	Feb-14-20 02:37		Feb-14-20 03:01		Feb-14-20 03:25		Feb-14-20 03:50		Feb-14-20 06:13		Feb-14-20 06:37	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
TPH-GRO		0.408 J	3.49	0.728 J	7.87	0.996 J	7.14	0.936 J	8.00	1.21 J	6.96	1.40 J	7.26

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Version: 1.%

Jessica Kramer
Project Assistant

Final 1.000

Certificate of Analysis Summary 652217

Terracon-Lubbock, Lubbock, TX

Project Name: Aikman SWD

Project Id: AR207018
Contact: Joseph Guesnier
Project Location:

Date Received in Lab: Wed Feb-12-20 04:45 pm
Report Date: 14-FEB-20
Project Manager: Jessica Kramer

Analysis Requested									
	Lab Id:	652217-013		652217-014					
	Field Id:	WTF-1 (1.5-2)		ETF-1 (1.5-2)					
	Depth:	1.5-2 ft		1.5-2 ft					
	Matrix:	SOIL		SOIL					
	Sampled:	Feb-10-20 13:38		Feb-10-20 13:45					
BTEX by EPA 8021B	***Extracted:***	Feb-13-20 11:13		Feb-13-20 11:13					
	Analyzed:	Feb-14-20 07:01		Feb-14-20 07:26					
	Units/RL:	mg/kg	RL	mg/kg	RL				
Benzene		<0.00878	0.0194	<0.00831	0.0184				
Toluene		<0.00454	0.0194	<0.00430	0.0184				
Ethylbenzene		<0.00598	0.0194	<0.00566	0.0184				
m,p-Xylenes		<0.00662	0.0388	<0.00627	0.0368				
o-Xylene		<0.00662	0.0194	<0.00627	0.0184				
Total Xylenes		<0.00662	0.0194	<0.00627	0.0184				
Total BTEX		<0.00454	0.0194	<0.00430	0.0184				
Chloride by EPA 300	***Extracted:***	Feb-13-20 14:30		Feb-13-20 14:30					
	Analyzed:	Feb-13-20 23:33		Feb-13-20 23:58					
	Units/RL:	mg/kg	RL	mg/kg	RL				
Chloride		3660 D	250	5100 D	1250				
DRO-ORO By SW8015B	***Extracted:***	Feb-13-20 12:00		Feb-13-20 12:00					
	Analyzed:	Feb-14-20 07:13		Feb-13-20 21:09					
	Units/RL:	mg/kg	RL	mg/kg	RL				
Diesel Range Organics (DRO)		19.6 J	25.1	<7.48	25.0				
Oil Range Hydrocarbons (ORO)		<7.51	25.1	<7.48	25.0				
TPH GRO by EPA 8015 Mod.	***Extracted:***	Feb-13-20 11:13		Feb-13-20 11:13					
	Analyzed:	Feb-14-20 07:01		Feb-14-20 07:26					
	Units/RL:	mg/kg	RL	mg/kg	RL				
TPH-GRO		0.612 J	3.88	0.494 J	3.68				

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Version: 1.%

Jessica Kramer
Project Assistant

Analytical Report 652217

for

Terracon-Lubbock

Project Manager: Joseph Guesnier

Aikman SWD

AR207018

14-FEB-20

Collected By: Client





6701 Aberdeen, Suite 9 Lubbock, TX 79424

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

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

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

14-FEB-20

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

Reference: XENCO Report No(s): **652217**
Aikman SWD
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) 652217. 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. 652217 will be filed for 45 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

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

Respectfully,

Jessica Kramer

Jessica Kramer
Project Assistant

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Sample Cross Reference 652217

Terracon-Lubbock, Lubbock, TX

Aikman SWD

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
SW-1 (0.5-1)	S	02-10-20 12:00	0.5 - 1 ft	652217-001
WW-1 (0.5-1)	S	02-10-20 12:08	0.5 - 1 ft	652217-002
NWT-1 (0.5-1)	S	02-10-20 12:25	0.5 - 1 ft	652217-003
NW-1 (0.5-1)	S	02-10-20 12:27	0.5 - 1 ft	652217-004
EW-1 (0.5-1)	S	02-10-20 12:33	0.5 - 1 ft	652217-005
SWT-1 (0.5-1)	S	02-10-20 12:38	0.5 - 1 ft	652217-006
NEW-1 (0.5-1)	S	02-10-20 12:47	0.5 - 1 ft	652217-007
SEW-1 (0.5-1)	S	02-10-20 12:56	0.5 - 1 ft	652217-008
NWF-1 (1.5-2)	S	02-10-20 13:04	1.5 - 2 ft	652217-009
SWF-1 (1.5-2)	S	02-10-20 13:13	1.5 - 2 ft	652217-010
NEF-1 (1.5-2)	S	02-10-20 13:21	1.5 - 2 ft	652217-011
SEF-1 (1.5-2)	S	02-10-20 13:29	1.5 - 2 ft	652217-012
WTF-1 (1.5-2)	S	02-10-20 13:38	1.5 - 2 ft	652217-013
ETF-1 (1.5-2)	S	02-10-20 13:45	1.5 - 2 ft	652217-014

CASE NARRATIVE

Client Name: Terracon-Lubbock

Project Name: Aikman SWD

Project ID: *AR207018*
Work Order Number(s): *652217*

Report Date: *14-FEB-20*
Date Received: *02/12/2020*

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-3116493 DRO-ORO By SW8015B
Surrogate Tricosane recovered below QC limits Data confirmed by re-analysis. Samples affected are: 7696655-1-BKS,7696655-1-BSD,652217-014 S,652217-014 SD,652217-014.

Batch: LBA-3116494 Chloride by EPA 300
Lab Sample ID 652217-006 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: 652217-001, -002, -003, -004, -005, -006, -007, -008, -009, -010.
The Laboratory Control Sample for Chloride is within laboratory Control Limits, therefore the data was accepted.

Batch: LBA-3116500 Chloride by EPA 300
Lab Sample ID 652217-011 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: 652217-011, -012, -013, -014.
The Laboratory Control Sample for Chloride is within laboratory Control Limits, therefore the data was accepted.

Batch: LBA-3116511 BTEX by EPA 8021B
Samples 652217-002, -004, -008, -009, -010, -011, and -012 were diluted due to hydrocarbons beyond Xylenes.

CASE NARRATIVE

Client Name: Terracon-Lubbock

Project Name: Aikman SWD

Project ID: *AR207018*
Work Order Number(s): *652217*

Report Date: *14-FEB-20*
Date Received: *02/12/2020*

Batch: LBA-3116517 TPH GRO by EPA 8015 Mod.
Samples 652217-002, -004, -008, -009, -010, -011, and -012 were diluted due to hydrocarbons beyond Xylenes.

Surrogate 4-Bromofluorobenzene recovered below QC limits. Matrix interferences is suspected; data confirmed by re-analysis.
Samples affected are: 652217-007,652217-006.

Certificate of Analytical Results 652217

Terracon-Lubbock, Lubbock, TX

Aikman SWD

Sample Id:	**SW-1 (0.5-1)**	Matrix:	Soil	Date Received:	02.12.20 16.45
Lab Sample Id:	652217-001	Date Collected:	02.10.20 12.00	Sample Depth:	0.5 - 1 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	RNL			% Moisture:	
Analyst:	RNL	Date Prep:	02.13.20 14.30	Basis:	Wet Weight
Seq Number:	3116494				

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**3580**	250	5.72	mg/kg	02.13.20 16.31	DX	10

Analytical Method:	DRO-ORO By SW8015B			Prep Method:	SW8015P
Tech:	MIT			% Moisture:	
Analyst:	MIT	Date Prep:	02.13.20 12.00	Basis:	Wet Weight
Seq Number:	3116493				

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Diesel Range Organics (DRO)	C10C28DRO	**13.4**	25.3	7.56	mg/kg	02.13.20 23.42	J	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<7.56	25.3	7.56	mg/kg	02.13.20 23.42	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
Tricosane	638-67-5	70	%	65-144	02.13.20 23.42	
n-Triacontane	638-68-6	93	%	46-152	02.13.20 23.42	

Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MIT			% Moisture:	
Analyst:	MIT	Date Prep:	02.13.20 11.13	Basis:	Wet Weight
Seq Number:	3116511				

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00888	0.0196	0.00888	mg/kg	02.13.20 22.11	U	1
Toluene	108-88-3	<0.00460	0.0196	0.00460	mg/kg	02.13.20 22.11	U	1
Ethylbenzene	100-41-4	<0.00605	0.0196	0.00605	mg/kg	02.13.20 22.11	U	1
m,p-Xylenes	179601-23-1	<0.00670	0.0393	0.00670	mg/kg	02.13.20 22.11	U	1
o-Xylene	95-47-6	<0.00670	0.0196	0.00670	mg/kg	02.13.20 22.11	U	1
Total Xylenes	1330-20-7	<0.00670	0.0196	0.00670	mg/kg	02.13.20 22.11	U	1
Total BTEX		<0.00460	0.0196	0.00460	mg/kg	02.13.20 22.11	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	86	%	68-120	02.13.20 22.11	
a,a,a-Trifluorotoluene	98-08-8	99	%	71-121	02.13.20 22.11	

Certificate of Analytical Results 652217

Terracon-Lubbock, Lubbock, TX

Aikman SWD

Sample Id:	**SW-1 (0.5-1)**	Matrix:	Soil	Date Received:	02.12.20 16.45
Lab Sample Id:	652217-001	Date Collected:	02.10.20 12.00	Sample Depth:	0.5 - 1 ft
Analytical Method:	TPH GRO by EPA 8015 Mod.			Prep Method:	SW5030B
Tech:	MIT			% Moisture:	
Analyst:	MIT	Date Prep:	02.13.20 11.13	Basis:	Wet Weight
Seq Number:	3116517				

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
TPH-GRO	8006-61-9	**2.79**	3.93	0.266	mg/kg	02.13.20 22.11	J	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	76	%	76-123	02.13.20 22.11	
a,a,a-Trifluorotoluene	98-08-8	77	%	69-120	02.13.20 22.11	

Certificate of Analytical Results 652217

Terracon-Lubbock, Lubbock, TX

Aikman SWD

Sample Id: **WW-1 (0.5-1)** Matrix: Soil Date Received:02.12.20 16.45

Lab Sample Id: 652217-002 Date Collected: 02.10.20 12.08 Sample Depth: 0.5 - 1 ft

Analytical Method: Chloride by EPA 300 Prep Method: E300P

Tech: RNL % Moisture:

Analyst: RNL Date Prep: 02.13.20 14.30 Basis: Wet Weight

Seq Number: 3116494

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**4230**	250	5.72	mg/kg	02.13.20 17.21	D	10

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

Tech: MIT % Moisture:

Analyst: MIT Date Prep: 02.13.20 12.00 Basis: Wet Weight

Seq Number: 3116493

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Diesel Range Organics (DRO)	C10C28DRO	**67.6**	25.1	7.50	mg/kg	02.14.20 00.19		1
Oil Range Hydrocarbons (ORO)	PHCG2835	<7.50	25.1	7.50	mg/kg	02.14.20 00.19	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
Tricosane	638-67-5	78	%	65-144	02.14.20 00.19	
n-Triacontane	638-68-6	98	%	46-152	02.14.20 00.19	

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

Tech: MIT % Moisture:

Analyst: MIT Date Prep: 02.13.20 11.13 Basis: Wet Weight

Seq Number: 3116511

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.0179	0.0396	0.0179	mg/kg	02.14.20 00.36	U	2
Toluene	108-88-3	<0.00927	0.0396	0.00927	mg/kg	02.14.20 00.36	U	2
Ethylbenzene	100-41-4	<0.0122	0.0396	0.0122	mg/kg	02.14.20 00.36	U	2
m,p-Xylenes	179601-23-1	<0.0135	0.0792	0.0135	mg/kg	02.14.20 00.36	U	2
o-Xylene	95-47-6	<0.0135	0.0396	0.0135	mg/kg	02.14.20 00.36	U	2
Total Xylenes	1330-20-7	<0.0135	0.0396	0.0135	mg/kg	02.14.20 00.36	U	2
Total BTEX		<0.00927	0.0396	0.00927	mg/kg	02.14.20 00.36	U	2

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	106	%	68-120	02.14.20 00.36	
a,a,a-Trifluorotoluene	98-08-8	113	%	71-121	02.14.20 00.36	

Certificate of Analytical Results 652217

Terracon-Lubbock, Lubbock, TX

Aikman SWD

Sample Id:	**WW-1 (0.5-1)**	Matrix:	Soil	Date Received:	02.12.20 16.45
Lab Sample Id:	652217-002	Date Collected:	02.10.20 12.08	Sample Depth:	0.5 - 1 ft
Analytical Method:	TPH GRO by EPA 8015 Mod.			Prep Method:	SW5030B
Tech:	MIT			% Moisture:	
Analyst:	MIT	Date Prep:	02.13.20 11.13	Basis:	Wet Weight
Seq Number:	3116517				

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
TPH-GRO	8006-61-9	**3.46**	7.92	0.537	mg/kg	02.14.20 00.36	J	2

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	85	%	76-123	02.14.20 00.36	
a,a,a-Trifluorotoluene	98-08-8	87	%	69-120	02.14.20 00.36	

Certificate of Analytical Results 652217

Terracon-Lubbock, Lubbock, TX

Aikman SWD

Sample Id: **NWT-1 (0.5-1)** Matrix: Soil Date Received:02.12.20 16.45

Lab Sample Id: 652217-003 Date Collected: 02.10.20 12.25 Sample Depth: 0.5 - 1 ft

Analytical Method: Chloride by EPA 300 Prep Method: E300P

Tech: RNL % Moisture:

Analyst: RNL Date Prep: 02.13.20 14.30 Basis: Wet Weight

Seq Number: 3116494

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**9510**	1250	28.6	mg/kg	02.13.20 17.46	D	50

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

Tech: MIT % Moisture:

Analyst: MIT Date Prep: 02.13.20 12.00 Basis: Wet Weight

Seq Number: 3116493

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Diesel Range Organics (DRO)	C10C28DRO	**74.9**	25.2	7.53	mg/kg	02.14.20 00.58		1
Oil Range Hydrocarbons (ORO)	PHCG2835	<7.53	25.2	7.53	mg/kg	02.14.20 00.58	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
Tricosane	638-67-5	77	%	65-144	02.14.20 00.58	
n-Triacontane	638-68-6	97	%	46-152	02.14.20 00.58	

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

Tech: MIT % Moisture:

Analyst: MIT Date Prep: 02.13.20 11.13 Basis: Wet Weight

Seq Number: 3116511

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00888	0.0196	0.00888	mg/kg	02.14.20 01.00	U	1
Toluene	108-88-3	**0.0177**	0.0196	0.00460	mg/kg	02.14.20 01.00	J	1
Ethylbenzene	100-41-4	<0.00605	0.0196	0.00605	mg/kg	02.14.20 01.00	U	1
m,p-Xylenes	179601-23-1	<0.00670	0.0393	0.00670	mg/kg	02.14.20 01.00	U	1
o-Xylene	95-47-6	<0.00670	0.0196	0.00670	mg/kg	02.14.20 01.00	U	1
Total Xylenes	1330-20-7	<0.00670	0.0196	0.00670	mg/kg	02.14.20 01.00	U	1
Total BTEX		**0.0177**	0.0196	0.00460	mg/kg	02.14.20 01.00	J	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	97	%	68-120	02.14.20 01.00	
a,a,a-Trifluorotoluene	98-08-8	118	%	71-121	02.14.20 01.00	

Certificate of Analytical Results 652217

Terracon-Lubbock, Lubbock, TX

Aikman SWD

Sample Id:	**NWT-1 (0.5-1)**	Matrix:	Soil	Date Received:	02.12.20 16.45
Lab Sample Id:	652217-003	Date Collected:	02.10.20 12.25	Sample Depth:	0.5 - 1 ft
Analytical Method:	TPH GRO by EPA 8015 Mod.			Prep Method:	SW5030B
Tech:	MIT			% Moisture:	
Analyst:	MIT	Date Prep:	02.13.20 11.13	Basis:	Wet Weight
Seq Number:	3116517				

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
TPH-GRO	8006-61-9	**0.752**	3.93	0.266	mg/kg	02.14.20 01.00	J	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	83	%	76-123	02.14.20 01.00	
a,a,a-Trifluorotoluene	98-08-8	92	%	69-120	02.14.20 01.00	

Certificate of Analytical Results 652217

Terracon-Lubbock, Lubbock, TX

Aikman SWD

Sample Id:	**NW-1 (0.5-1)**	Matrix:	Soil	Date Received:	02.12.20 16.45
Lab Sample Id:	652217-004	Date Collected:	02.10.20 12.27	Sample Depth:	0.5 - 1 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	RNL			% Moisture:	
Analyst:	RNL	Date Prep:	02.13.20 14.30	Basis:	Wet Weight
Seq Number:	3116494				

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**8520**	1250	28.6	mg/kg	02.13.20 18.10	D	50

Analytical Method:	DRO-ORO By SW8015B			Prep Method:	SW8015P
Tech:	MIT			% Moisture:	
Analyst:	MIT	Date Prep:	02.13.20 12.00	Basis:	Wet Weight
Seq Number:	3116493				

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Diesel Range Organics (DRO)	C10C28DRO	**52.8**	25.1	7.52	mg/kg	02.14.20 01.35		1
Oil Range Hydrocarbons (ORO)	PHCG2835	<7.52	25.1	7.52	mg/kg	02.14.20 01.35	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
Tricosane	638-67-5	78	%	65-144	02.14.20 01.35	
n-Triacontane	638-68-6	96	%	46-152	02.14.20 01.35	

Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MIT			% Moisture:	
Analyst:	MIT	Date Prep:	02.13.20 11.13	Basis:	Wet Weight
Seq Number:	3116511				

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.0175	0.0386	0.0175	mg/kg	02.14.20 01.25	U	2
Toluene	108-88-3	<0.00903	0.0386	0.00903	mg/kg	02.14.20 01.25	U	2
Ethylbenzene	100-41-4	<0.0119	0.0386	0.0119	mg/kg	02.14.20 01.25	U	2
m,p-Xylenes	179601-23-1	<0.0132	0.0772	0.0132	mg/kg	02.14.20 01.25	U	2
o-Xylene	95-47-6	<0.0132	0.0386	0.0132	mg/kg	02.14.20 01.25	U	2
Total Xylenes	1330-20-7	<0.0132	0.0386	0.0132	mg/kg	02.14.20 01.25	U	2
Total BTEX		<0.00903	0.0386	0.00903	mg/kg	02.14.20 01.25	U	2

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	99	%	68-120	02.14.20 01.25	
a,a,a-Trifluorotoluene	98-08-8	107	%	71-121	02.14.20 01.25	

Certificate of Analytical Results 652217

Terracon-Lubbock, Lubbock, TX

Aikman SWD

Sample Id:	**NW-1 (0.5-1)**	Matrix:	Soil	Date Received:	02.12.20 16.45
Lab Sample Id:	652217-004	Date Collected:	02.10.20 12.27	Sample Depth:	0.5 - 1 ft
Analytical Method:	TPH GRO by EPA 8015 Mod.			Prep Method:	SW5030B
Tech:	MIT			% Moisture:	
Analyst:	MIT	Date Prep:	02.13.20 11.13	Basis:	Wet Weight
Seq Number:	3116517				

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
TPH-GRO	8006-61-9	**1.07**	7.72	0.523	mg/kg	02.14.20 01.25	J	2

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	84	%	76-123	02.14.20 01.25	
a,a,a-Trifluorotoluene	98-08-8	83	%	69-120	02.14.20 01.25	

Certificate of Analytical Results 652217

Terracon-Lubbock, Lubbock, TX

Aikman SWD

Sample Id: **EW-1 (0.5-1)** Matrix: Soil Date Received:02.12.20 16.45

Lab Sample Id: 652217-005 Date Collected: 02.10.20 12.33 Sample Depth: 0.5 - 1 ft

Analytical Method: Chloride by EPA 300 Prep Method: E300P

Tech: RNL % Moisture:

Analyst: RNL Date Prep: 02.13.20 14.30 Basis: Wet Weight

Seq Number: 3116494

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**5520**	1250	28.6	mg/kg	02.13.20 18.35	D	50

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

Tech: MIT % Moisture:

Analyst: MIT Date Prep: 02.13.20 12.00 Basis: Wet Weight

Seq Number: 3116493

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Diesel Range Organics (DRO)	C10C28DRO	**16.7**	25.1	7.50	mg/kg	02.14.20 02.13	J	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<7.50	25.1	7.50	mg/kg	02.14.20 02.13	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
Tricosane	638-67-5	71	%	65-144	02.14.20 02.13	
n-Triacontane	638-68-6	94	%	46-152	02.14.20 02.13	

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

Tech: MIT % Moisture:

Analyst: MIT Date Prep: 02.13.20 11.13 Basis: Wet Weight

Seq Number: 3116511

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00783	0.0173	0.00783	mg/kg	02.14.20 01.49	U	1
Toluene	108-88-3	<0.00406	0.0173	0.00406	mg/kg	02.14.20 01.49	U	1
Ethylbenzene	100-41-4	<0.00534	0.0173	0.00534	mg/kg	02.14.20 01.49	U	1
m,p-Xylenes	179601-23-1	<0.00591	0.0347	0.00591	mg/kg	02.14.20 01.49	U	1
o-Xylene	95-47-6	<0.00591	0.0173	0.00591	mg/kg	02.14.20 01.49	U	1
Total Xylenes	1330-20-7	<0.00591	0.0173	0.00591	mg/kg	02.14.20 01.49	U	1
Total BTEX		<0.00406	0.0173	0.00406	mg/kg	02.14.20 01.49	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	88	%	68-120	02.14.20 01.49	
a,a,a-Trifluorotoluene	98-08-8	106	%	71-121	02.14.20 01.49	

Certificate of Analytical Results 652217

Terracon-Lubbock, Lubbock, TX

Aikman SWD

Sample Id:	**EW-1 (0.5-1)**	Matrix:	Soil	Date Received:	02.12.20 16.45
Lab Sample Id:	652217-005	Date Collected:	02.10.20 12.33	Sample Depth:	0.5 - 1 ft
Analytical Method:	TPH GRO by EPA 8015 Mod.			Prep Method:	SW5030B
Tech:	MIT			% Moisture:	
Analyst:	MIT	Date Prep:	02.13.20 11.13	Basis:	Wet Weight
Seq Number:	3116517				

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
TPH-GRO	8006-61-9	**2.32**	3.47	0.235	mg/kg	02.14.20 01.49	J	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	79	%	76-123	02.14.20 01.49	
a,a,a-Trifluorotoluene	98-08-8	82	%	69-120	02.14.20 01.49	

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Terracon-Lubbock, Lubbock, TX

Aikman SWD

Sample Id:	**SWT-1 (0.5-1)**	Matrix:	Soil	Date Received:	02.12.20 16.45
Lab Sample Id:	652217-006	Date Collected:	02.10.20 12.38	Sample Depth:	0.5 - 1 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	RNL			% Moisture:	
Analyst:	RNL	Date Prep:	02.13.20 14.30	Basis:	Wet Weight
Seq Number:	3116494				

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**11000**	2500	57.2	mg/kg	02.13.20 19.12	DX	100

Analytical Method:	DRO-ORO By SW8015B			Prep Method:	SW8015P
Tech:	MIT			% Moisture:	
Analyst:	MIT	Date Prep:	02.13.20 12.00	Basis:	Wet Weight
Seq Number:	3116493				

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Diesel Range Organics (DRO)	C10C28DRO	**21.1**	25.2	7.53	mg/kg	02.14.20 02.49	J	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<7.53	25.2	7.53	mg/kg	02.14.20 02.49	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
Tricosane	638-67-5	73	%	65-144	02.14.20 02.49	
n-Triacontane	638-68-6	95	%	46-152	02.14.20 02.49	

Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MIT			% Moisture:	
Analyst:	MIT	Date Prep:	02.13.20 11.13	Basis:	Wet Weight
Seq Number:	3116511				

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00890	0.0197	0.00890	mg/kg	02.14.20 02.13	U	1
Toluene	108-88-3	<0.00461	0.0197	0.00461	mg/kg	02.14.20 02.13	U	1
Ethylbenzene	100-41-4	<0.00606	0.0197	0.00606	mg/kg	02.14.20 02.13	U	1
m,p-Xylenes	179601-23-1	<0.00671	0.0394	0.00671	mg/kg	02.14.20 02.13	U	1
o-Xylene	95-47-6	<0.00671	0.0197	0.00671	mg/kg	02.14.20 02.13	U	1
Total Xylenes	1330-20-7	<0.00671	0.0197	0.00671	mg/kg	02.14.20 02.13	U	1
Total BTEX		<0.00461	0.0197	0.00461	mg/kg	02.14.20 02.13	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	83	%	68-120	02.14.20 02.13	
a,a,a-Trifluorotoluene	98-08-8	102	%	71-121	02.14.20 02.13	

Certificate of Analytical Results 652217

Terracon-Lubbock, Lubbock, TX

Aikman SWD

Sample Id:	**SWT-1 (0.5-1)**	Matrix:	Soil	Date Received:	02.12.20 16.45
Lab Sample Id:	652217-006	Date Collected:	02.10.20 12.38	Sample Depth:	0.5 - 1 ft
Analytical Method:	TPH GRO by EPA 8015 Mod.			Prep Method:	SW5030B
Tech:	MIT			% Moisture:	
Analyst:	MIT	Date Prep:	02.13.20 11.13	Basis:	Wet Weight
Seq Number:	3116517				

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
TPH-GRO	8006-61-9	**0.780**	3.94	0.267	mg/kg	02.14.20 02.13	J	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	72	%	76-123	02.14.20 02.13	**
a,a,a-Trifluorotoluene	98-08-8	79	%	69-120	02.14.20 02.13	

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Terracon-Lubbock, Lubbock, TX

Aikman SWD

Sample Id: **NEW-1 (0.5-1)** Matrix: Soil Date Received:02.12.20 16.45

Lab Sample Id: 652217-007 Date Collected: 02.10.20 12.47 Sample Depth: 0.5 - 1 ft

Analytical Method: Chloride by EPA 300 Prep Method: E300P

Tech: RNL % Moisture:

Analyst: RNL Date Prep: 02.13.20 14.30 Basis: Wet Weight

Seq Number: 3116494

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**1580**	250	5.72	mg/kg	02.13.20 20.02	D	10

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

Tech: MIT % Moisture:

Analyst: MIT Date Prep: 02.13.20 12.00 Basis: Wet Weight

Seq Number: 3116493

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Diesel Range Organics (DRO)	C10C28DRO	<7.53	25.2	7.53	mg/kg	02.14.20 03.29	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<7.53	25.2	7.53	mg/kg	02.14.20 03.29	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
Tricosane	638-67-5	70	%	65-144	02.14.20 03.29	
n-Triacontane	638-68-6	93	%	46-152	02.14.20 03.29	

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

Tech: MIT % Moisture:

Analyst: MIT Date Prep: 02.13.20 11.13 Basis: Wet Weight

Seq Number: 3116511

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00789	0.0175	0.00789	mg/kg	02.14.20 02.37	U	1
Toluene	108-88-3	<0.00408	0.0175	0.00408	mg/kg	02.14.20 02.37	U	1
Ethylbenzene	100-41-4	<0.00538	0.0175	0.00538	mg/kg	02.14.20 02.37	U	1
m,p-Xylenes	179601-23-1	<0.00595	0.0349	0.00595	mg/kg	02.14.20 02.37	U	1
o-Xylene	95-47-6	<0.00595	0.0175	0.00595	mg/kg	02.14.20 02.37	U	1
Total Xylenes	1330-20-7	<0.00595	0.0175	0.00595	mg/kg	02.14.20 02.37	U	1
Total BTEX		<0.00408	0.0175	0.00408	mg/kg	02.14.20 02.37	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	87	%	68-120	02.14.20 02.37	
a,a,a-Trifluorotoluene	98-08-8	104	%	71-121	02.14.20 02.37	

Certificate of Analytical Results 652217

Terracon-Lubbock, Lubbock, TX

Aikman SWD

Sample Id:	**NEW-1 (0.5-1)**	Matrix:	Soil	Date Received:	02.12.20 16.45
Lab Sample Id:	652217-007	Date Collected:	02.10.20 12.47	Sample Depth:	0.5 - 1 ft
Analytical Method:	TPH GRO by EPA 8015 Mod.			Prep Method:	SW5030B
Tech:	MIT			% Moisture:	
Analyst:	MIT	Date Prep:	02.13.20 11.13	Basis:	Wet Weight
Seq Number:	3116517				

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
TPH-GRO	8006-61-9	**0.408**	3.49	0.236	mg/kg	02.14.20 02.37	J	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	73	%	76-123	02.14.20 02.37	**
a,a,a-Trifluorotoluene	98-08-8	81	%	69-120	02.14.20 02.37	

Certificate of Analytical Results 652217

Terracon-Lubbock, Lubbock, TX

Aikman SWD

Sample Id: **SEW-1 (0.5-1)** Matrix: Soil Date Received:02.12.20 16.45

Lab Sample Id: 652217-008 Date Collected: 02.10.20 12.56 Sample Depth: 0.5 - 1 ft

Analytical Method: Chloride by EPA 300 Prep Method: E300P

Tech: RNL % Moisture:

Analyst: RNL Date Prep: 02.13.20 14.30 Basis: Wet Weight

Seq Number: 3116494

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**5820**	1250	28.6	mg/kg	02.13.20 20.27	D	50

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

Tech: MIT % Moisture:

Analyst: MIT Date Prep: 02.13.20 12.00 Basis: Wet Weight

Seq Number: 3116493

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Diesel Range Organics (DRO)	C10C28DRO	**27.8**	24.9	7.44	mg/kg	02.14.20 04.06		1
Oil Range Hydrocarbons (ORO)	PHCG2835	<7.44	24.9	7.44	mg/kg	02.14.20 04.06	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
Tricosane	638-67-5	73	%	65-144	02.14.20 04.06	
n-Triacontane	638-68-6	97	%	46-152	02.14.20 04.06	

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

Tech: MIT % Moisture:

Analyst: MIT Date Prep: 02.13.20 11.13 Basis: Wet Weight

Seq Number: 3116511

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.0178	0.0394	0.0178	mg/kg	02.14.20 03.01	U	2
Toluene	108-88-3	<0.00921	0.0394	0.00921	mg/kg	02.14.20 03.01	U	2
Ethylbenzene	100-41-4	<0.0121	0.0394	0.0121	mg/kg	02.14.20 03.01	U	2
m,p-Xylenes	179601-23-1	<0.0134	0.0787	0.0134	mg/kg	02.14.20 03.01	U	2
o-Xylene	95-47-6	<0.0134	0.0394	0.0134	mg/kg	02.14.20 03.01	U	2
Total Xylenes	1330-20-7	<0.0134	0.0394	0.0134	mg/kg	02.14.20 03.01	U	2
Total BTEX		<0.00921	0.0394	0.00921	mg/kg	02.14.20 03.01	U	2

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	114	%	68-120	02.14.20 03.01	
a,a,a-Trifluorotoluene	98-08-8	130	%	71-121	02.14.20 03.01	**

Certificate of Analytical Results 652217

Terracon-Lubbock, Lubbock, TX

Aikman SWD

Sample Id:	**SEW-1 (0.5-1)**	Matrix:	Soil	Date Received:	02.12.20 16.45
Lab Sample Id:	652217-008	Date Collected:	02.10.20 12.56	Sample Depth:	0.5 - 1 ft
Analytical Method:	TPH GRO by EPA 8015 Mod.			Prep Method:	SW5030B
Tech:	MIT			% Moisture:	
Analyst:	MIT	Date Prep:	02.13.20 11.13	Basis:	Wet Weight
Seq Number:	3116517				

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
TPH-GRO	8006-61-9	**0.728**	7.87	0.533	mg/kg	02.14.20 03.01	J	2

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	96	%	76-123	02.14.20 03.01	
a,a,a-Trifluorotoluene	98-08-8	102	%	69-120	02.14.20 03.01	

Certificate of Analytical Results 652217

Terracon-Lubbock, Lubbock, TX

Aikman SWD

Sample Id: **NWF-1 (1.5-2)** Matrix: Soil Date Received:02.12.20 16.45

Lab Sample Id: 652217-009 Date Collected: 02.10.20 13.04 Sample Depth: 1.5 - 2 ft

Analytical Method: Chloride by EPA 300 Prep Method: E300P

Tech: RNL % Moisture:

Analyst: RNL Date Prep: 02.13.20 14.30 Basis: Wet Weight

Seq Number: 3116494

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**7320**	1250	28.6	mg/kg	02.13.20 20.52	D	50

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

Tech: MIT % Moisture:

Analyst: MIT Date Prep: 02.13.20 12.00 Basis: Wet Weight

Seq Number: 3116493

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Diesel Range Organics (DRO)	C10C28DRO	**27.8**	25.2	7.53	mg/kg	02.14.20 04.43		1
Oil Range Hydrocarbons (ORO)	PHCG2835	<7.53	25.2	7.53	mg/kg	02.14.20 04.43	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
Tricosane	638-67-5	74	%	65-144	02.14.20 04.43	
n-Triacontane	638-68-6	96	%	46-152	02.14.20 04.43	

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

Tech: MIT % Moisture:

Analyst: MIT Date Prep: 02.13.20 11.13 Basis: Wet Weight

Seq Number: 3116511

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.0161	0.0357	0.0161	mg/kg	02.14.20 03.25	U	2
Toluene	108-88-3	<0.00836	0.0357	0.00836	mg/kg	02.14.20 03.25	U	2
Ethylbenzene	100-41-4	<0.0110	0.0357	0.0110	mg/kg	02.14.20 03.25	U	2
m,p-Xylenes	179601-23-1	<0.0122	0.0714	0.0122	mg/kg	02.14.20 03.25	U	2
o-Xylene	95-47-6	<0.0122	0.0357	0.0122	mg/kg	02.14.20 03.25	U	2
Total Xylenes	1330-20-7	<0.0122	0.0357	0.0122	mg/kg	02.14.20 03.25	U	2
Total BTEX		<0.00836	0.0357	0.00836	mg/kg	02.14.20 03.25	U	2

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	103	%	68-120	02.14.20 03.25	
a,a,a-Trifluorotoluene	98-08-8	117	%	71-121	02.14.20 03.25	

Certificate of Analytical Results 652217

Terracon-Lubbock, Lubbock, TX

Aikman SWD

Sample Id:	**NWF-1 (1.5-2)**	Matrix:	Soil	Date Received:	02.12.20 16.45
Lab Sample Id:	652217-009	Date Collected:	02.10.20 13.04	Sample Depth:	1.5 - 2 ft
Analytical Method:	TPH GRO by EPA 8015 Mod.			Prep Method:	SW5030B
Tech:	MIT			% Moisture:	
Analyst:	MIT	Date Prep:	02.13.20 11.13	Basis:	Wet Weight
Seq Number:	3116517				

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
TPH-GRO	8006-61-9	**0.996**	7.14	0.484	mg/kg	02.14.20 03.25	J	2

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	89	%	76-123	02.14.20 03.25	
a,a,a-Trifluorotoluene	98-08-8	91	%	69-120	02.14.20 03.25	

Certificate of Analytical Results 652217

Terracon-Lubbock, Lubbock, TX

Aikman SWD

Sample Id:	**SWF-1 (1.5-2)**	Matrix:	Soil	Date Received:	02.12.20 16.45
Lab Sample Id:	652217-010	Date Collected:	02.10.20 13.13	Sample Depth:	1.5 - 2 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	RNL			% Moisture:	
Analyst:	RNL	Date Prep:	02.13.20 14.30	Basis:	Wet Weight
Seq Number:	3116494				

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**6710**	1250	28.6	mg/kg	02.13.20 21.17	D	50

Analytical Method:	DRO-ORO By SW8015B			Prep Method:	SW8015P
Tech:	MIT			% Moisture:	
Analyst:	MIT	Date Prep:	02.13.20 12.00	Basis:	Wet Weight
Seq Number:	3116493				

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Diesel Range Organics (DRO)	C10C28DRO	**33.4**	25.0	7.49	mg/kg	02.14.20 05.21		1
Oil Range Hydrocarbons (ORO)	PHCG2835	<7.49	25.0	7.49	mg/kg	02.14.20 05.21	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
Tricosane	638-67-5	77	%	65-144	02.14.20 05.21	
n-Triacontane	638-68-6	99	%	46-152	02.14.20 05.21	

Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MIT			% Moisture:	
Analyst:	MIT	Date Prep:	02.13.20 11.13	Basis:	Wet Weight
Seq Number:	3116511				

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.0181	0.0400	0.0181	mg/kg	02.14.20 03.50	U	2
Toluene	108-88-3	<0.00936	0.0400	0.00936	mg/kg	02.14.20 03.50	U	2
Ethylbenzene	100-41-4	<0.0123	0.0400	0.0123	mg/kg	02.14.20 03.50	U	2
m,p-Xylenes	179601-23-1	<0.0136	0.0800	0.0136	mg/kg	02.14.20 03.50	U	2
o-Xylene	95-47-6	<0.0136	0.0400	0.0136	mg/kg	02.14.20 03.50	U	2
Total Xylenes	1330-20-7	<0.0136	0.0400	0.0136	mg/kg	02.14.20 03.50	U	2
Total BTEX		<0.00936	0.0400	0.00936	mg/kg	02.14.20 03.50	U	2

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	113	%	68-120	02.14.20 03.50	
a,a,a-Trifluorotoluene	98-08-8	118	%	71-121	02.14.20 03.50	

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Terracon-Lubbock, Lubbock, TX

Aikman SWD

Sample Id:	**SWF-1 (1.5-2)**	Matrix:	Soil	Date Received:	02.12.20 16.45
Lab Sample Id:	652217-010	Date Collected:	02.10.20 13.13	Sample Depth:	1.5 - 2 ft
Analytical Method:	TPH GRO by EPA 8015 Mod.			Prep Method:	SW5030B
Tech:	MIT			% Moisture:	
Analyst:	MIT	Date Prep:	02.13.20 11.13	Basis:	Wet Weight
Seq Number:	3116517				

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
TPH-GRO	8006-61-9	**0.936**	8.00	0.542	mg/kg	02.14.20 03.50	J	2

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	91	%	76-123	02.14.20 03.50	
a,a,a-Trifluorotoluene	98-08-8	92	%	69-120	02.14.20 03.50	

Certificate of Analytical Results 652217

Terracon-Lubbock, Lubbock, TX

Aikman SWD

Sample Id: **NEF-1 (1.5-2)** Matrix: Soil Date Received:02.12.20 16.45

Lab Sample Id: 652217-011 Date Collected: 02.10.20 13.21 Sample Depth: 1.5 - 2 ft

Analytical Method: Chloride by EPA 300 Prep Method: E300P

Tech: RNL % Moisture:

Analyst: RNL Date Prep: 02.13.20 14.30 Basis: Wet Weight

Seq Number: 3116500

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**6690**	1250	28.6	mg/kg	02.13.20 22.31	DX	50

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

Tech: MIT % Moisture:

Analyst: MIT Date Prep: 02.13.20 12.00 Basis: Wet Weight

Seq Number: 3116493

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Diesel Range Organics (DRO)	C10C28DRO	**39.0**	24.9	7.45	mg/kg	02.14.20 05.59		1
Oil Range Hydrocarbons (ORO)	PHCG2835	<7.45	24.9	7.45	mg/kg	02.14.20 05.59	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
Tricosane	638-67-5	78	%	65-144	02.14.20 05.59	
n-Triacontane	638-68-6	98	%	46-152	02.14.20 05.59	

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

Tech: MIT % Moisture:

Analyst: MIT Date Prep: 02.13.20 11.13 Basis: Wet Weight

Seq Number: 3116511

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.0157	0.0348	0.0157	mg/kg	02.14.20 06.13	U	2
Toluene	108-88-3	<0.00814	0.0348	0.00814	mg/kg	02.14.20 06.13	U	2
Ethylbenzene	100-41-4	<0.0107	0.0348	0.0107	mg/kg	02.14.20 06.13	U	2
m,p-Xylenes	179601-23-1	<0.0119	0.0696	0.0119	mg/kg	02.14.20 06.13	U	2
o-Xylene	95-47-6	<0.0119	0.0348	0.0119	mg/kg	02.14.20 06.13	U	2
Total Xylenes	1330-20-7	<0.0119	0.0348	0.0119	mg/kg	02.14.20 06.13	U	2
Total BTEX		<0.00814	0.0348	0.00814	mg/kg	02.14.20 06.13	U	2

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	119	%	68-120	02.14.20 06.13	
a,a,a-Trifluorotoluene	98-08-8	125	%	71-121	02.14.20 06.13	**

Certificate of Analytical Results 652217

Terracon-Lubbock, Lubbock, TX

Aikman SWD

Sample Id:	**NEF-1 (1.5-2)**	Matrix:	Soil	Date Received:	02.12.20 16.45
Lab Sample Id:	652217-011	Date Collected:	02.10.20 13.21	Sample Depth:	1.5 - 2 ft
Analytical Method:	TPH GRO by EPA 8015 Mod.			Prep Method:	SW5030B
Tech:	MIT			% Moisture:	
Analyst:	MIT	Date Prep:	02.13.20 11.13	Basis:	Wet Weight
Seq Number:	3116517				

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
TPH-GRO	8006-61-9	**1.21**	6.96	0.471	mg/kg	02.14.20 06.13	J	2

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	98	%	76-123	02.14.20 06.13	
a,a,a-Trifluorotoluene	98-08-8	98	%	69-120	02.14.20 06.13	

Certificate of Analytical Results 652217

Terracon-Lubbock, Lubbock, TX

Aikman SWD

Sample Id: **SEF-1 (1.5-2)** Matrix: Soil Date Received:02.12.20 16.45

Lab Sample Id: 652217-012 Date Collected: 02.10.20 13.29 Sample Depth: 1.5 - 2 ft

Analytical Method: Chloride by EPA 300 Prep Method: E300P

Tech: RNL % Moisture:

Analyst: RNL Date Prep: 02.13.20 14.30 Basis: Wet Weight

Seq Number: 3116500

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**7260**	1250	28.6	mg/kg	02.13.20 23.21	D	50

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

Tech: MIT % Moisture:

Analyst: MIT Date Prep: 02.13.20 12.00 Basis: Wet Weight

Seq Number: 3116493

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Diesel Range Organics (DRO)	C10C28DRO	**18.7**	25.0	7.47	mg/kg	02.14.20 06.35	J	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<7.47	25.0	7.47	mg/kg	02.14.20 06.35	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
Tricosane	638-67-5	74	%	65-144	02.14.20 06.35	
n-Triacontane	638-68-6	96	%	46-152	02.14.20 06.35	

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

Tech: MIT % Moisture:

Analyst: MIT Date Prep: 02.13.20 11.13 Basis: Wet Weight

Seq Number: 3116511

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.0164	0.0363	0.0164	mg/kg	02.14.20 06.37	U	2
Toluene	108-88-3	<0.00849	0.0363	0.00849	mg/kg	02.14.20 06.37	U	2
Ethylbenzene	100-41-4	<0.0112	0.0363	0.0112	mg/kg	02.14.20 06.37	U	2
m,p-Xylenes	179601-23-1	<0.0124	0.0726	0.0124	mg/kg	02.14.20 06.37	U	2
o-Xylene	95-47-6	<0.0124	0.0363	0.0124	mg/kg	02.14.20 06.37	U	2
Total Xylenes	1330-20-7	<0.0124	0.0363	0.0124	mg/kg	02.14.20 06.37	U	2
Total BTEX		<0.00849	0.0363	0.00849	mg/kg	02.14.20 06.37	U	2

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	119	%	68-120	02.14.20 06.37	
a,a,a-Trifluorotoluene	98-08-8	128	%	71-121	02.14.20 06.37	**

Certificate of Analytical Results 652217

Terracon-Lubbock, Lubbock, TX

Aikman SWD

Sample Id:	**SEF-1 (1.5-2)**	Matrix:	Soil	Date Received:	02.12.20 16.45
Lab Sample Id:	652217-012	Date Collected:	02.10.20 13.29	Sample Depth:	1.5 - 2 ft
Analytical Method:	TPH GRO by EPA 8015 Mod.			Prep Method:	SW5030B
Tech:	MIT			% Moisture:	
Analyst:	MIT	Date Prep:	02.13.20 11.13	Basis:	Wet Weight
Seq Number:	3116517				

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
TPH-GRO	8006-61-9	**1.40**	7.26	0.492	mg/kg	02.14.20 06.37	J	2

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	96	%	76-123	02.14.20 06.37	
a,a,a-Trifluorotoluene	98-08-8	100	%	69-120	02.14.20 06.37	

Certificate of Analytical Results 652217

Terracon-Lubbock, Lubbock, TX

Aikman SWD

Sample Id: **WTF-1 (1.5-2)** Matrix: Soil Date Received:02.12.20 16.45

Lab Sample Id: 652217-013 Date Collected: 02.10.20 13.38 Sample Depth: 1.5 - 2 ft

Analytical Method: Chloride by EPA 300 Prep Method: E300P

Tech: RNL % Moisture:

Analyst: RNL Date Prep: 02.13.20 14.30 Basis: Wet Weight

Seq Number: 3116500

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**3660**	250	5.72	mg/kg	02.13.20 23.46	D	10

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

Tech: MIT % Moisture:

Analyst: MIT Date Prep: 02.13.20 12.00 Basis: Wet Weight

Seq Number: 3116493

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Diesel Range Organics (DRO)	C10C28DRO	**19.6**	25.1	7.51	mg/kg	02.14.20 07.13	J	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<7.51	25.1	7.51	mg/kg	02.14.20 07.13	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
Tricosane	638-67-5	74	%	65-144	02.14.20 07.13	
n-Triacontane	638-68-6	95	%	46-152	02.14.20 07.13	

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

Tech: MIT % Moisture:

Analyst: MIT Date Prep: 02.13.20 11.13 Basis: Wet Weight

Seq Number: 3116511

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00878	0.0194	0.00878	mg/kg	02.14.20 07.01	U	1
Toluene	108-88-3	<0.00454	0.0194	0.00454	mg/kg	02.14.20 07.01	U	1
Ethylbenzene	100-41-4	<0.00598	0.0194	0.00598	mg/kg	02.14.20 07.01	U	1
m,p-Xylenes	179601-23-1	<0.00662	0.0388	0.00662	mg/kg	02.14.20 07.01	U	1
o-Xylene	95-47-6	<0.00662	0.0194	0.00662	mg/kg	02.14.20 07.01	U	1
Total Xylenes	1330-20-7	<0.00662	0.0194	0.00662	mg/kg	02.14.20 07.01	U	1
Total BTEX		<0.00454	0.0194	0.00454	mg/kg	02.14.20 07.01	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	101	%	68-120	02.14.20 07.01	
a,a,a-Trifluorotoluene	98-08-8	123	%	71-121	02.14.20 07.01	**

Certificate of Analytical Results 652217

Terracon-Lubbock, Lubbock, TX

Aikman SWD

Sample Id:	**WTF-1 (1.5-2)**	Matrix:	Soil	Date Received:	02.12.20 16.45
Lab Sample Id:	652217-013	Date Collected:	02.10.20 13.38	Sample Depth:	1.5 - 2 ft
Analytical Method:	TPH GRO by EPA 8015 Mod.			Prep Method:	SW5030B
Tech:	MIT			% Moisture:	
Analyst:	MIT	Date Prep:	02.13.20 11.13	Basis:	Wet Weight
Seq Number:	3116517				

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
TPH-GRO	8006-61-9	**0.612**	3.88	0.263	mg/kg	02.14.20 07.01	J	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	86	%	76-123	02.14.20 07.01	
a,a,a-Trifluorotoluene	98-08-8	96	%	69-120	02.14.20 07.01	

Certificate of Analytical Results 652217

Terracon-Lubbock, Lubbock, TX

Aikman SWD

Sample Id: **ETF-1 (1.5-2)** Matrix: Soil Date Received:02.12.20 16.45

Lab Sample Id: 652217-014 Date Collected: 02.10.20 13.45 Sample Depth: 1.5 - 2 ft

Analytical Method: Chloride by EPA 300 Prep Method: E300P

Tech: RNL % Moisture:

Analyst: RNL Date Prep: 02.13.20 14.30 Basis: Wet Weight

Seq Number: 3116500

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**5100**	1250	28.6	mg/kg	02.14.20 00.10	D	50

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

Tech: MIT % Moisture:

Analyst: MIT Date Prep: 02.13.20 12.00 Basis: Wet Weight

Seq Number: 3116493

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Diesel Range Organics (DRO)	C10C28DRO	<7.48	25.0	7.48	mg/kg	02.13.20 21.09	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<7.48	25.0	7.48	mg/kg	02.13.20 21.09	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
Tricosane	638-67-5	60	%	65-144	02.13.20 21.09	**
n-Triacontane	638-68-6	87	%	46-152	02.13.20 21.09	

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

Tech: MIT % Moisture:

Analyst: MIT Date Prep: 02.13.20 11.13 Basis: Wet Weight

Seq Number: 3116511

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00831	0.0184	0.00831	mg/kg	02.14.20 07.26	U	1
Toluene	108-88-3	<0.00430	0.0184	0.00430	mg/kg	02.14.20 07.26	U	1
Ethylbenzene	100-41-4	<0.00566	0.0184	0.00566	mg/kg	02.14.20 07.26	U	1
m,p-Xylenes	179601-23-1	<0.00627	0.0368	0.00627	mg/kg	02.14.20 07.26	U	1
o-Xylene	95-47-6	<0.00627	0.0184	0.00627	mg/kg	02.14.20 07.26	U	1
Total Xylenes	1330-20-7	<0.00627	0.0184	0.00627	mg/kg	02.14.20 07.26	U	1
Total BTEX		<0.00430	0.0184	0.00430	mg/kg	02.14.20 07.26	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	108	%	68-120	02.14.20 07.26	
a,a,a-Trifluorotoluene	98-08-8	126	%	71-121	02.14.20 07.26	**

Certificate of Analytical Results 652217

Terracon-Lubbock, Lubbock, TX

Aikman SWD

Sample Id:	**ETF-1 (1.5-2)**	Matrix:	Soil	Date Received:	02.12.20 16.45
Lab Sample Id:	652217-014	Date Collected:	02.10.20 13.45	Sample Depth:	1.5 - 2 ft
Analytical Method:	TPH GRO by EPA 8015 Mod.			Prep Method:	SW5030B
Tech:	MIT			% Moisture:	
Analyst:	MIT	Date Prep:	02.13.20 11.13	Basis:	Wet Weight
Seq Number:	3116517				

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
TPH-GRO	8006-61-9	**0.494**	3.68	0.249	mg/kg	02.14.20 07.26	J	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	91	%	76-123	02.14.20 07.26	
a,a,a-Trifluorotoluene	98-08-8	98	%	69-120	02.14.20 07.26	

Flagging Criteria

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

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

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

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

F RPD exceeded lab control limits.

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

U Analyte was not detected.

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

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

K Sample analyzed outside of recommended hold time.

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

** Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit.

RL Reporting Limit

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

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

DL Method Detection Limit

NC Non-Calculable

SMP Client Sample **BLK** Method Blank

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

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

+ NELAC certification not offered for this compound.

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

QC Summary 652217

Terracon-Lubbock

Aikman SWD

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3116494 — Matrix: Solid — Date Prep: 02.13.20
MB Sample Id: 7696652-1-BLK — LCS Sample Id: 7696652-1-BKS — LCSD Sample Id: 7696652-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<0.572	250	252	101	249	100	90-110	1	20	mg/kg	02.13.20 15:54	

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3116500 — Matrix: Solid — Date Prep: 02.13.20
MB Sample Id: 7696653-1-BLK — LCS Sample Id: 7696653-1-BKS — LCSD Sample Id: 7696653-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<0.572	250	254	102	253	101	90-110	0	20	mg/kg	02.13.20 21:54	

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3116494 — Matrix: Soil — Date Prep: 02.13.20
Parent Sample Id: 652217-001 — MS Sample Id: 652217-001 S — MSD Sample Id: 652217-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	2370	250	3710	536	3660	516	80-120	1	20	mg/kg	02.13.20 16:43	X

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3116494 — Matrix: Soil — Date Prep: 02.13.20
Parent Sample Id: 652217-006 — MS Sample Id: 652217-006 S — MSD Sample Id: 652217-006 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	8580	250	10600	808	10600	808	80-120	0	20	mg/kg	02.13.20 19:25	X

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3116500 — Matrix: Soil — Date Prep: 02.13.20
Parent Sample Id: 652217-011 — MS Sample Id: 652217-011 S — MSD Sample Id: 652217-011 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	5820	250	6630	324	6490	268	80-120	2	20	mg/kg	02.13.20 22:44	X

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

QC Summary 652217

Terracon-Lubbock

Aikman SWD

Analytical Method: DRO-ORO By SW8015B — Prep Method: SW8015P
Seq Number: 3116493 — Matrix: Solid — Date Prep: 02.13.20
MB Sample Id: 7696655-1-BLK — LCS Sample Id: 7696655-1-BKS — LCSD Sample Id: 7696655-1-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	75.4	75	90.9	91	63-139	19	20	mg/kg	02.13.20 17:56	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
Tricosane	65		61	**	60	**	65-144	%	02.13.20 17:56
n-Triacontane	90		81		81		46-152	%	02.13.20 17:56

Analytical Method: DRO-ORO By SW8015B — Prep Method: SW8015P
Seq Number: 3116493 — Matrix: Solid — Date Prep: 02.13.20
MB Sample Id: 7696655-1-BLK

Parameter	MB Result	Units	Analysis Date	Flag
Oil Range Hydrocarbons (ORO)	<7.48	mg/kg	02.13.20 20:30	

Analytical Method: DRO-ORO By SW8015B — Prep Method: SW8015P
Seq Number: 3116493 — Matrix: Soil — Date Prep: 02.13.20
Parent Sample Id: 652217-014 — MS Sample Id: 652217-014 S — MSD Sample Id: 652217-014 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	70.8	70	65.3	65	63-139	8	20	mg/kg	02.13.20 21:47	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
Tricosane	61	**	63	**	65-144	%	02.13.20 21:47
n-Triacontane	82		84		46-152	%	02.13.20 21:47

Analytical Method: BTEX by EPA 8021B — Prep Method: SW5030B
Seq Number: 3116511 — Matrix: Solid — Date Prep: 02.13.20
MB Sample Id: 7696662-1-BLK — LCS Sample Id: 7696662-1-BKS — LCSD Sample Id: 7696662-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00904	2.00	1.96	98	1.99	100	55-120	2	20	mg/kg	02.13.20 19:23	
Toluene	<0.00468	2.00	2.09	105	2.10	105	77-120	0	20	mg/kg	02.13.20 19:23	
Ethylbenzene	<0.00616	2.00	2.12	106	2.16	108	77-120	2	20	mg/kg	02.13.20 19:23	
m,p-Xylenes	<0.00682	4.00	4.20	105	4.30	108	78-120	2	20	mg/kg	02.13.20 19:23	
o-Xylene	<0.00682	2.00	2.12	106	2.16	108	78-120	2	20	mg/kg	02.13.20 19:23	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
4-Bromofluorobenzene	109		91		93		68-120	%	02.13.20 19:23
a,a,a-Trifluorotoluene	121		95		96		71-121	%	02.13.20 19:23

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

QC Summary 652217

Terracon-Lubbock

Aikman SWD

Analytical Method: **BTEX by EPA 8021B** Prep Method: SW5030B
Seq Number: 3116511 Matrix: Soil Date Prep: 02.13.20
Parent Sample Id: 652217-001 MS Sample Id: 652217-001 S MSD Sample Id: 652217-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00881	1.95	1.92	98	1.91	101	54-120	1	25	mg/kg	02.13.20 22:35	
Toluene	<0.00456	1.95	2.00	103	2.00	106	57-120	0	25	mg/kg	02.13.20 22:35	
Ethylbenzene	<0.00600	1.95	2.01	103	2.00	106	58-131	0	25	mg/kg	02.13.20 22:35	
m,p-Xylenes	<0.00665	3.90	3.96	102	3.95	105	62-124	0	25	mg/kg	02.13.20 22:35	
o-Xylene	<0.00665	1.95	2.08	107	2.09	111	62-124	0	25	mg/kg	02.13.20 22:35	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
4-Bromofluorobenzene	99		97		68-120	%	02.13.20 22:35
a,a,a-Trifluorotoluene	115		113		71-121	%	02.13.20 22:35

Analytical Method: **TPH GRO by EPA 8015 Mod.** Prep Method: SW5030B
Seq Number: 3116517 Matrix: Solid Date Prep: 02.13.20
MB Sample Id: 7696665-1-BLK LCS Sample Id: 7696665-1-BKS LCSD Sample Id: 7696665-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
TPH-GRO	<0.271	20.0	19.5	98	19.7	99	35-129	1	20	mg/kg	02.13.20 20:11	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
4-Bromofluorobenzene	92		104		111		76-123	%	02.13.20 20:11
a,a,a-Trifluorotoluene	95		70		78		69-120	%	02.13.20 20:11

Analytical Method: **TPH GRO by EPA 8015 Mod.** Prep Method: SW5030B
Seq Number: 3116517 Matrix: Soil Date Prep: 02.13.20
Parent Sample Id: 652217-001 MS Sample Id: 652217-001 S MSD Sample Id: 652217-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
TPH-GRO	2.79	18.1	19.3	91	20.0	94	35-129	4	20	mg/kg	02.13.20 23:24	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
4-Bromofluorobenzene	106		118		76-123	%	02.13.20 23:24
a,a,a-Trifluorotoluene	82		86		69-120	%	02.13.20 23:24

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

Released to Imaging: 8/29/2023 1:29:02 PM
Received by OCD: 4/10/2023 1:07:45 PM

652217

652217

CHAIN OF CUSTODY RECORD

Terracon

Laboratory: Xenco
Address: 6701 Aberdeen
Lubbock, Texas 79424

Office Location: Lubbock
Phone:
Project Manager: Joseph Guesnier
Contact: Joseph Guesnier (806-544-9276)
Sampler's Name: Charles Cannon
SRS #:
Sampler's Signature

ANALYSIS REQUESTED

LAB USE ONLY
DUE DATE:
TEMP OF COOLER WHEN RECEIVED (°C): 1.2/1.3

Project Number: AR207018
Project Name: AIKMAN SWD

Matrix	Date	Time	Comp	Grab	Identifying Marks of Sample(s)	Start Depth	End Depth	No. Type of Containers: 2 oz Glass	4 oz Glass	5035 kit	40 ml VOA	BTEX (EPA Method 8021B)	TPH Extended 8015	Chloride (EPA Method 300)	Hold				Lab Sample ID
S	2/10/2020	12:00	X		SW-1	0.5'	1'		X			X	X	X					1
S	2/10/2020	12:08	X		WW-1	0.5'	1'		X			X	X	X					2
S	2/10/2020	12:25	X		NWT-1	0.5'	1'		X			X	X	X					3
S	2/10/2020	12:27	X		NW-1	0.5'	1'		X			X	X	X					4
S	2/10/2020	12:33	X		EW-1	0.5'	1'		X			X	X	X					5
S	2/10/2020	12:38	X		SWT-1	0.5'	1'		X			X	X	X					6
S	2/10/2020	12:47	X		NEW-1	0.5'	1'		X			X	X	X					7
S	2/10/2020	12:56	X		SEW-1	0.5'	1'		X			X	X	X					8
S	2/10/2020	13:04	X		NWF-1	1.5'	2'		X			X	X	X					9
S	2/10/2020	13:13	X		SWF-1	1.5'	2'		X			X	X	X					10
S	2/10/2020	13:21	X		NEF-1	1.5'	2'		X			X	X	X					11
S	2/10/2020	13:29	X		SEF-1	1.5'	2'		X			X	X	X					12
S	2/10/2020	13:38	X		WTF-1	1.5'	2'		X			X	X	X					13
S	2/10/2020	13:45	X		ETF-1	1.5'	2'		X			X	X	X					14

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

TRRP Laboratory Review Checklist ☐ Yes ☐ No

	Date	Time		Date	Time
Relinquished by (Signature)	2/10/2020	16:45	Received by (Signature) Brenda Ward		
Relinquished by (Signature)			Received by (Signature)		
Relinquished by (Signature)			Received by (Signature)		
Relinquished by (Signature)			Received by (Signature)		

NOTES: Client:

e-mail results to:

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

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

XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In

Client: Terracon-Lubbock

Date/ Time Received: 02.12.2020 04.45.00 PM

Work Order #: 652217

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)?	1.3
#2 *Shipping container in good condition?	**Yes**
#3 *Samples received on ice?	**Yes**
#4 *Custody Seals intact on shipping container/ cooler?	**N/A**
#5 Custody Seals intact on sample bottles?	**N/A**
#6*Custody Seals Signed and dated?	**N/A**
#7 *Chain of Custody present?	**Yes**
#8 Any missing/extra samples?	**No**
#9 Chain of Custody signed when relinquished/ received?	**Yes**
#10 Chain of Custody agrees with sample labels/matrix?	**Yes**
#11 Container label(s) legible and intact?	**Yes**
#12 Samples in proper container/ bottle?	**Yes**
#13 Samples properly preserved?	**Yes**
#14 Sample container(s) intact?	**Yes**
#15 Sufficient sample amount for indicated test(s)?	**Yes**
#16 All samples received within hold time?	**Yes**
#17 Subcontract of sample(s)?	**N/A**
#18 Water VOC samples have zero headspace?	**N/A**

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

Analyst: PH Device/Lot#:

Checklist completed by: Brenda Ward Date: 02.12.2020
Brenda Ward

Checklist reviewed by: Jessica Kramer Date: 02.13.2020
Jessica Kramer

Certificate of Analysis Summary 654390

Terracon-Lubbock, Lubbock, TX

Project Name: Aikman SWD

Project Id: AR207018
Contact: Joseph Guesnier
Project Location:

Date Received in Lab: Mon Mar-02-20 04:10 pm
Report Date: 05-MAR-20
Project Manager: Jessica Kramer

Analysis Requested							
	Lab Id:	654390-001					
	Field Id:	SWT-1.1 (0.5-1)`					
	Depth:	0.5-1 ft					
	Matrix:	SOIL					
	Sampled:	Feb-26-20 13:00					
BTEX by SW 8260C SUB: T104704215-19-30	***Extracted:***	Mar-04-20 07:50					
	Analyzed:	Mar-04-20 13:26					
	Units/RL:	mg/kg	RL				
Benzene		<0.000207	0.00100				
Toluene		<0.00100	0.00501				
Ethylbenzene		<0.000336	0.00100				
m,p-Xylenes		<0.000438	0.00200				
o-Xylene		<0.000987	0.00100				
Total Xylenes		<0.000438	0.00100				
Total BTEX		<0.000207	0.00100				
Chloride by EPA 300	***Extracted:***	Mar-04-20 08:30					
	Analyzed:	Mar-04-20 12:54					
	Units/RL:	mg/kg	RL				
Chloride		2410	250				
DRO-ORO By SW8015B	***Extracted:***	Mar-03-20 15:30					
	Analyzed:	Mar-04-20 13:26					
	Units/RL:	mg/kg	RL				
Diesel Range Organics (DRO)		<7.56	25.3				
Oil Range Hydrocarbons (ORO)		<7.56	25.3				
TPH GRO by EPA 8015 Mod.	***Extracted:***	Mar-03-20 14:30					
	Analyzed:	Mar-04-20 13:28					
	Units/RL:	mg/kg	RL				
TPH-GRO		<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.
XENCO Laboratories assumes no responsibility and makes no warranty to the end use of the data hereby presented.
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

Jessica Kramer
Project Assistant

Final 1.000

Analytical Report 654390

for

Terracon-Lubbock

Project Manager: Joseph Guesnier

Aikman SWD

AR207018

05-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)

05-MAR-20

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

Reference: XENCO Report No(s): **654390**
Aikman SWD
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) 654390. 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. 654390 will be filed for 45 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

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

Respectfully,

Jessica Kramer

Jessica Kramer
Project Assistant

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

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

Sample Cross Reference 654390

Terracon-Lubbock, Lubbock, TX

Aikman SWD

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
SWT-1.1 (0.5-1)`	S	02-26-20 13:00	0.5 - 1 ft	654390-001

CASE NARRATIVE

Client Name: Terracon-Lubbock

Project Name: Aikman SWD

Project ID: *AR207018*
Work Order Number(s): *654390*

Report Date: *05-MAR-20*
Date Received: *03/02/2020*

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

Batch: LBA-3118634 DRO-ORO By SW8015B
Surrogate Tricosane recovered below QC limits. Matrix interferences is suspected; data confirmed by re-analysis.
Samples affected are: 654390-001 S.
Matrix Spike RPD outside Qaulity Control Limits, Control Spike RPD within limits; therefore the data was accepted.

Certificate of Analytical Results 654390

Terracon-Lubbock, Lubbock, TX

Aikman SWD

Sample Id:	**SWT-1.1 (0.5-1)`**	Matrix:	Soil	Date Received:	03.02.20 16.10
Lab Sample Id:	654390-001	Date Collected:	02.26.20 13.00	Sample Depth:	0.5 - 1 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	RNL			% Moisture:	
Analyst:	RNL	Date Prep:	03.04.20 08.30	Basis:	Wet Weight
Seq Number:	3118502				

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**2410**	250	5.72	mg/kg	03.04.20 12.54		10

Analytical Method:	DRO-ORO By SW8015B			Prep Method:	SW8015P
Tech:	MIT			% Moisture:	
Analyst:	MIT	Date Prep:	03.03.20 15.30	Basis:	Wet Weight
Seq Number:	3118634				

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Diesel Range Organics (DRO)	C10C28DRO	<7.56	25.3	7.56	mg/kg	03.04.20 13.26	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<7.56	25.3	7.56	mg/kg	03.04.20 13.26	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
Tricosane	638-67-5	72	%	65-144	03.04.20 13.26	
n-Triacontane	638-68-6	110	%	46-152	03.04.20 13.26	

Analytical Method:	BTEX by SW 8260C			Prep Method:	SW5035A
Tech:	SAD			% Moisture:	
Analyst:	SAD	Date Prep:	03.04.20 07.50	Basis:	Wet Weight
Seq Number:	3118517			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	03.04.20 13.26	U	1
Toluene	108-88-3	<0.00100	0.00501	0.00100	mg/kg	03.04.20 13.26	U	1
Ethylbenzene	100-41-4	<0.000336	0.00100	0.000336	mg/kg	03.04.20 13.26	U	1
m,p-Xylenes	179601-23-1	<0.000438	0.00200	0.000438	mg/kg	03.04.20 13.26	U	1
o-Xylene	95-47-6	<0.000987	0.00100	0.000987	mg/kg	03.04.20 13.26	U	1
Total Xylenes	1330-20-7	<0.000438	0.00100	0.000438	mg/kg	03.04.20 13.26	U	1
Total BTEX		<0.000207	0.00100	0.000207	mg/kg	03.04.20 13.26	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
Dibromofluoromethane	1868-53-7	104	%	53-142	03.04.20 13.26	
1,2-Dichloroethane-D4	17060-07-0	108	%	53-150	03.04.20 13.26	
Toluene-D8	2037-26-5	101	%	70-130	03.04.20 13.26	

Certificate of Analytical Results 654390

Terracon-Lubbock, Lubbock, TX

Aikman SWD

Sample Id:	**SWT-1.1 (0.5-1)`**	Matrix:	Soil	Date Received:	03.02.20 16.10
Lab Sample Id:	654390-001	Date Collected:	02.26.20 13.00	Sample Depth:	0.5 - 1 ft
Analytical Method:	TPH GRO by EPA 8015 Mod.			Prep Method:	SW5030B
Tech:	JGR			% Moisture:	
Analyst:	MIT	Date Prep:	03.03.20 14.30	Basis:	Wet Weight
Seq Number:	3118554				

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
TPH-GRO	8006-61-9	<0.259	3.82	0.259	mg/kg	03.04.20 13.28	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	110	%	76-123	03.04.20 13.28	
a,a,a-Trifluorotoluene	98-08-8	102	%	69-120	03.04.20 13.28	

Flagging Criteria

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

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

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

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

F RPD exceeded lab control limits.

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

U Analyte was not detected.

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

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

K Sample analyzed outside of recommended hold time.

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

** Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit.

RL Reporting Limit

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

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

DL Method Detection Limit

NC Non-Calculable

SMP Client Sample **BLK** Method Blank

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

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

+ NELAC certification not offered for this compound.

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

QC Summary 654390

Terracon-Lubbock

Aikman SWD

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3118502 — Matrix: Solid — Date Prep: 03.04.20
MB Sample Id: 7698057-1-BLK — LCS Sample Id: 7698057-1-BKS — LCSD Sample Id: 7698057-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<0.572	250	253	101	253	101	90-110	0	20	mg/kg	03.04.20 10:15	

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3118502 — Matrix: Soil — Date Prep: 03.04.20
Parent Sample Id: 654203-001 — MS Sample Id: 654203-001 S — MSD Sample Id: 654203-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	6.09	250	273	107	278	109	80-120	2	20	mg/kg	03.04.20 11:10	

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3118502 — Matrix: Soil — Date Prep: 03.04.20
Parent Sample Id: 654203-011 — MS Sample Id: 654203-011 S — MSD Sample Id: 654203-011 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	2.10	250	249	99	250	99	80-120	0	20	mg/kg	03.04.20 12:40	

Analytical Method: DRO-ORO By SW8015B — Prep Method: SW8015P
Seq Number: 3118634 — Matrix: Solid — Date Prep: 03.03.20
MB Sample Id: 7698022-1-BLK — LCS Sample Id: 7698022-1-BKS — LCSD Sample Id: 7698022-1-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	93.0	93	85.1	85	63-139	9	20	mg/kg	03.04.20 09:37	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
Tricosane	68		72		70		65-144	%	03.04.20 09:37
n-Triacontane	98		103		101		46-152	%	03.04.20 09:37

Analytical Method: DRO-ORO By SW8015B — Prep Method: SW8015P
Seq Number: 3118634 — Matrix: Solid — Date Prep: 03.03.20
MB Sample Id: 7698022-1-BLK

Parameter	MB Result	Units	Analysis Date	Flag
Oil Range Hydrocarbons (ORO)	<7.48	mg/kg	03.04.20 12:46	

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

Final 1.000

QC Summary 654390

Terracon-Lubbock

Aikman SWD

Analytical Method: DRO-ORO By SW8015B | Prep Method: SW8015P
Seq Number: 3118634 | Matrix: Soil | Date Prep: 03.03.20
Parent Sample Id: 654390-001 | MS Sample Id: 654390-001 S | MSD Sample Id: 654390-001 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)	<7.46	99.7	65.3	65	122	122	63-139	61	20	mg/kg	03.04.20 14:04	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
Tricosane	59	**	78		65-144	%	03.04.20 14:04
n-Triacontane	88		109		46-152	%	03.04.20 14:04

Analytical Method: BTEX by SW 8260C | Prep Method: SW5035A
Seq Number: 3118517 | Matrix: Solid | Date Prep: 03.04.20
MB Sample Id: 7698070-1-BLK | LCS Sample Id: 7698070-1-BKS | LCSD Sample Id: 7698070-1-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	0.0455	91	0.0497	99	62-132	9	25	mg/kg	03.04.20 09:55	
Toluene	<0.00100	0.0500	0.0478	96	0.0528	106	66-124	10	25	mg/kg	03.04.20 09:55	
Ethylbenzene	<0.000336	0.0500	0.0497	99	0.0547	109	71-134	10	25	mg/kg	03.04.20 09:55	
m,p-Xylenes	<0.000437	0.100	0.0988	99	0.110	110	69-128	11	25	mg/kg	03.04.20 09:55	
o-Xylene	<0.000985	0.0500	0.0515	103	0.0578	116	72-131	12	25	mg/kg	03.04.20 09:55	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
Dibromofluoromethane	98		98		100		53-142	%	03.04.20 09:55
1,2-Dichloroethane-D4	104		99		102		53-150	%	03.04.20 09:55
Toluene-D8	104		108		110		70-130	%	03.04.20 09:55

Analytical Method: BTEX by SW 8260C | Prep Method: SW5035A
Seq Number: 3118517 | Matrix: Soil | Date Prep: 03.04.20
Parent Sample Id: 653880-002 | MS Sample Id: 653880-002 S | MSD Sample Id: 653880-002 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.000206	0.0498	0.0234	47	0.0405	81	62-132	54	25	mg/kg	03.04.20 10:58	XF
Toluene	<0.000996	0.0498	0.0222	45	0.0397	79	66-124	57	25	mg/kg	03.04.20 10:58	XF
Ethylbenzene	<0.000334	0.0498	0.0207	42	0.0389	77	71-134	61	25	mg/kg	03.04.20 10:58	XF
m,p-Xylenes	<0.000435	0.0996	0.0409	41	0.0779	77	69-128	62	25	mg/kg	03.04.20 10:58	XF
o-Xylene	<0.000981	0.0498	0.0212	43	0.0413	82	72-131	64	25	mg/kg	03.04.20 10:58	XF

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
Dibromofluoromethane	102		108		53-142	%	03.04.20 10:58
1,2-Dichloroethane-D4	107		108		53-150	%	03.04.20 10:58
Toluene-D8	107		108		70-130	%	03.04.20 10:58

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

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

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

Final 1.000

QC Summary 654390

Terracon-Lubbock

Aikman SWD

Analytical Method: **TPH GRO by EPA 8015 Mod.** Prep Method: SW5030B

Seq Number: 3118554 Matrix: Solid Date Prep: 03.03.20

MB Sample Id: 7698099-1-BLK LCS Sample Id: 7698099-1-BKS LCSD Sample Id: 7698099-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
TPH-GRO	<0.271	20.0	18.4	92	19.2	96	35-129	4	20	mg/kg	03.03.20 21:05	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
4-Bromofluorobenzene	101		143	**	122		76-123	%	03.03.20 21:05
a,a,a-Trifluorotoluene	99		104		84		69-120	%	03.03.20 21:05

Analytical Method: **TPH GRO by EPA 8015 Mod.** Prep Method: SW5030B

Seq Number: 3118554 Matrix: Soil Date Prep: 03.03.20

Parent Sample Id: 654170-001 MS Sample Id: 654170-001 S MSD Sample Id: 654170-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
TPH-GRO	<0.239	17.7	16.8	95	20.9	105	35-129	22	20	mg/kg	03.04.20 00:20	F

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
4-Bromofluorobenzene	138	**	119		76-123	%	03.04.20 00:20
a,a,a-Trifluorotoluene	106		79		69-120	%	03.04.20 00:20

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

Released to Imaging: 8/29/2023 1:29:02 PM
Received by OCD: 4/10/2023 1:07:45 PM

654390

CHAIN OF CUSTODY RECORD

Terracon

Laboratory: Xenco
Address: 6701 Aberdeen
Lubbock, Texas 79424

Office Location: Lubbock
Phone:
Project Manager: Joseph Guesnier
Contact: Joseph Guesnier (806-544-9276)
Sampler's Name: Charles Cannon
SRS #:
Sampler's Signature

ANALYSIS REQUESTED

LAB USE ONLY
DUE DATE: 654390

TEMP OF COOLER WHEN RECEIVED (°C)

Page 1 of 2

Project Number: AR207018
Project Name: Aikman SWD

Matrix	Date	Time	Comp	Grab	Identifying Marks of Sample(s)	Start Depth	End Depth	No. Type of Containers: 2 oz Glass	4 oz Glass	5035 kit	40 ml VOA	Chloride (EPA Method 300)	BTEX (EPA Method 8260B)	TPH Extended 8015	Hold	Lab Sample ID
S	2/26/2020	13:00	X		SWT-1.1 (0.5-1)	1.5'	2'		X			X	X	X		1

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

TRRP Laboratory Review Checklist: ☐ Yes ☐ No

Relinquished by (Signature)	Date:	Time:	Received by (Signature)	Date:	Time:
	3-2-20	4:10	Holley Taylor	3/2/20	1610
Relinquished by (Signature)	Date:	Time:	Received by (Signature)	Date:	Time:
Relinquished by (Signature)	Date:	Time:	Received by (Signature)	Date:	Time:
Relinquished by (Signature)	Date:	Time:	Received by (Signature)	Date:	Time:

NOTES: Client:

e-mail results to:

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

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

IR 4
-7.61-7.5°C

Inter-Office Shipment

IOS Number : 59375

Date/Time:	03.03.2020	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.:	777923417550	E-Mail:	jessica.kramer@xenco.com

Sample Id	Matrix	Client Sample Id	Sample Collection	Method	Method Name	Lab Due	HT Due	PM	Analytes	Sign
654390-001	S	SWT-1.1 (0.5-1)`	02.26.2020 13:00	SW8260CBTEX	BTEX by SW 8260C	**03.04.2020**	03.11.2020	JKR	BZ BZME EBZ XYLENE	

Inter Office Shipment or Sample Comments:

Relinquished By: Brenda Ward

Brenda Ward

Date Relinquished: 03.03.2020

Received By: Jose Londono

Date Received: 03.04.2020

Cooler Temperature: 2.4

XENCO Laboratories

Inter Office Report- Sample Receipt Checklist

Sent To: Houston

IOS #: 59375

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:** 03.03.2020 01.34 PM

Received By: Jose Londono **Date Received:** 03.04.2020 09.15 AM

Sample Receipt Checklist		Comments
#1 *Temperature of cooler(s)?	2.4	
#2 *Shipping container in good condition?	**Yes**	
#3 *Samples received with appropriate temperature?	**Yes**	
#4 *Custody Seals intact on shipping container/ cooler?	**Yes**	
#5 *Custody Seals Signed and dated for Containers/coolers	**Yes**	
#6 *IOS present?	**Yes**	
#7 Any missing/extra samples?	**No**	
#8 IOS agrees with sample label(s)/matrix?	**Yes**	
#9 Sample matrix/ properties agree with IOS?	**Yes**	
#10 Samples in proper container/ bottle?	**Yes**	
#11 Samples properly preserved?	**Yes**	
#12 Sample container(s) intact?	**Yes**	
#13 Sufficient sample amount for indicated test(s)?	**Yes**	
#14 All samples received within hold time?	**Yes**	

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

NonConformance:

Corrective Action Taken:

Nonconformance Documentation

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

Checklist reviewed by: Jose F. Londono Date: 03.04.2020

Jose Londono

XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In

Client: Terracon-Lubbock

Date/ Time Received: 03.02.2020 04.10.00 PM

Work Order #: 654390

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)?	-7.5	
#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**	BTEX sent to Stafford
#18 Water VOC samples have zero headspace?	**N/A**	

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

Analyst: PH Device/Lot#:

Checklist completed by: Brenda Ward Date: 03.03.2020
Brenda Ward

Checklist reviewed by: Jessica Kramer Date: 03.04.2020
Jessica Kramer

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Certificate of Analysis Summary 682364

Terracon-Lubbock, Lubbock, TX

Project Name: Aikman SWD

Project Id: AR207018
Contact: Joseph Guesnier
Project Location:

Date Received in Lab: Tue 12.22.2020 17:02
Report Date: 12.28.2020 15:11
Project Manager: Jessica Kramer

Analysis Requested		682364-002		682364-003		682364-006		682364-007		682364-011		682364-012	
	Field Id:	GP-1 (3-4)		GP-1 (5-6)		GP-2 (3-4)		GP-2 (5-6)		GP-3 (3-4)		GP-3 (5-6)	
	Depth:	3-4		5-6		3-4		5-6		3-4		5-6	
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	12.21.2020 14:05		12.21.2020 14:10		12.21.2020 14:25		12.21.2020 14:30		12.21.2020 14:50		12.21.2020 14:55	
BTEX by EPA 8021B SUB: T104704400-20-21	***Extracted:***	12.24.2020 10:30		12.24.2020 10:30		12.24.2020 10:30		12.24.2020 10:30		12.24.2020 10:30		12.28.2020 10:00	
	Analyzed:	12.24.2020 18:23		12.24.2020 18:43		12.24.2020 19:04		12.24.2020 19:24		12.24.2020 19:45		12.28.2020 12:40	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Benzene		<0.00202	0.00202	<0.00199	0.00199	<0.00200	0.00200	<0.00200	0.00200	<0.00202	0.00202	<0.00199	0.00199
Toluene		<0.00202	0.00202	<0.00199	0.00199	<0.00200	0.00200	<0.00200	0.00200	<0.00202	0.00202	<0.00199	0.00199
Ethylbenzene		<0.00202	0.00202	<0.00199	0.00199	<0.00200	0.00200	<0.00200	0.00200	<0.00202	0.00202	<0.00199	0.00199
m,p-Xylenes		0.00476	0.00404	0.00470	0.00398	<0.00399	0.00399	<0.00399	0.00399	<0.00403	0.00403	<0.00398	0.00398
o-Xylene		0.00217	0.00202	0.00238	0.00199	<0.00200	0.00200	<0.00200	0.00200	<0.00202	0.00202	<0.00199	0.00199
Xylenes, Total		0.00693	0.00202	0.00708	0.00199	<0.00200	0.00200	<0.00200	0.00200	<0.00202	0.00202	<0.00199	0.00199
Total BTEX		0.00693	0.00202	0.00708	0.00199	<0.00200	0.00200	<0.00200	0.00200	<0.00202	0.00202	<0.00199	0.00199
Chloride by EPA 300 SUB: T104704400-20-21	***Extracted:***	12.28.2020 08:15		12.28.2020 08:15		12.28.2020 08:15		12.28.2020 08:15		12.28.2020 08:15		12.28.2020 08:15	
	Analyzed:	12.28.2020 08:55		12.28.2020 13:35		12.28.2020 09:16		12.28.2020 09:21		12.28.2020 09:26		12.28.2020 09:42	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		613	5.04	<5.00	5.00	631	4.98	466	4.98	623	5.01	491	5.04
TPH by SW8015 Mod SUB: T104704400-20-21	***Extracted:***	12.24.2020 12:00		12.24.2020 12:00		12.24.2020 12:00		12.24.2020 12:00		12.24.2020 12:00		12.24.2020 12:00	
	Analyzed:	12.25.2020 06:09		12.25.2020 07:14		12.25.2020 07:36		12.25.2020 07:58		12.25.2020 08:21		12.25.2020 08:44	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Gasoline Range Hydrocarbons (GRO)		<49.9	49.9	<49.9	49.9	<49.8	49.8	<49.9	49.9	<49.8	49.8	<50.0	50.0
Diesel Range Organics (DRO)		<49.9	49.9	<49.9	49.9	<49.8	49.8	<49.9	49.9	<49.8	49.8	<50.0	50.0
Motor Oil Range Hydrocarbons (MRO)		<49.9	49.9	<49.9	49.9	<49.8	49.8	<49.9	49.9	<49.8	49.8	<50.0	50.0
Total TPH		<49.9	49.9	<49.9	49.9	<49.8	49.8	<49.9	49.9	<49.8	49.8	<50.0	50.0

BRL - Below Reporting Limit

Jessica Kramer

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

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Certificate of Analysis Summary 682364

Terracon-Lubbock, Lubbock, TX

Project Name: Aikman SWD

Project Id: AR207018
Contact: Joseph Guesnier
Project Location:

Date Received in Lab: Tue 12.22.2020 17:02
Report Date: 12.28.2020 15:11
Project Manager: Jessica Kramer

Analysis Requested									
	Lab Id:	682364-017		682364-018					
	Field Id:	GP-4 (3-4)		GP-4 (5-6)					
	Depth:	3-4		5-6					
	Matrix:	SOIL		SOIL					
	Sampled:	12.21.2020 15:20		12.21.2020 15:25					
BTEX by EPA 8021B SUB: T104704400-20-21	***Extracted:***	12.28.2020 10:00		12.28.2020 10:00					
	Analyzed:	12.28.2020 13:01		12.28.2020 13:21					
	Units/RL:	mg/kg	RL	mg/kg	RL				
Benzene		<0.00198	0.00198	<0.00199	0.00199				
Toluene		<0.00198	0.00198	<0.00199	0.00199				
Ethylbenzene		<0.00198	0.00198	<0.00199	0.00199				
m,p-Xylenes		<0.00396	0.00396	<0.00398	0.00398				
o-Xylene		<0.00198	0.00198	<0.00199	0.00199				
Xylenes, Total		<0.00198	0.00198	<0.00199	0.00199				
Total BTEX		<0.00198	0.00198	<0.00199	0.00199				
Chloride by EPA 300 SUB: T104704400-20-21	***Extracted:***	12.28.2020 08:15		12.28.2020 08:15					
	Analyzed:	12.28.2020 09:47		12.28.2020 09:52					
	Units/RL:	mg/kg	RL	mg/kg	RL				
Chloride		17.0	5.03	6.60	4.96				
TPH by SW8015 Mod SUB: T104704400-20-21	***Extracted:***	12.24.2020 12:00		12.24.2020 12:00					
	Analyzed:	12.25.2020 09:07		12.25.2020 09:31					
	Units/RL:	mg/kg	RL	mg/kg	RL				
Gasoline Range Hydrocarbons (GRO)		<50.0	50.0	<50.0	50.0				
Diesel Range Organics (DRO)		<50.0	50.0	<50.0	50.0				
Motor Oil Range Hydrocarbons (MRO)		<50.0	50.0	<50.0	50.0				
Total TPH		<50.0	50.0	<50.0	50.0				

BRL - Below Reporting Limit

Jessica Kramer

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

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Analytical Report 682364

for

Terracon-Lubbock

Project Manager: Joseph Guesnier

Aikman SWD

AR207018

12.28.2020

Collected By: Client

6701 Aberdeen, Suite 9 Lubbock, TX 79424

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

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

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-20-18)
Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-20-23)
Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-19-21)
Xenco-Carlsbad (LELAP): Louisiana (05092)
Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-20-8)
Xenco-Tampa: Florida (E87429), North Carolina (483)

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12.28.2020

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

Reference: Eurofins Xenco, LLC Report No(s): **682364**
Aikman SWD
Project Address:

Joseph Guesnier:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the Eurofins Xenco, LLC Report Number(s) 682364. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

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

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by Eurofins Xenco, LLC. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 682364 will be filed for 45 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

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

Respectfully,

Jessica Kramer

Jessica Kramer
Project Manager

A Small Business and Minority Company

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

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Sample Cross Reference 682364

Terracon-Lubbock, Lubbock, TX

Aikman SWD

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
GP-1 (3-4)	S	12.21.2020 14:05	3 - 4	682364-002
GP-1 (5-6)	S	12.21.2020 14:10	5 - 6	682364-003
GP-2 (3-4)	S	12.21.2020 14:25	3 - 4	682364-006
GP-2 (5-6)	S	12.21.2020 14:30	5 - 6	682364-007
GP-3 (3-4)	S	12.21.2020 14:50	3 - 4	682364-011
GP-3 (5-6)	S	12.21.2020 14:55	5 - 6	682364-012
GP-4 (3-4)	S	12.21.2020 15:20	3 - 4	682364-017
GP-4 (5-6)	S	12.21.2020 15:25	5 - 6	682364-018
GP-1 (1-2)	S	12.21.2020 14:00	1 - 2	Not Analyzed
GP-1 (6-7)	S	12.21.2020 14:15	6 - 7	Not Analyzed
GP-2 (1-2)	S	12.21.2020 14:20	1 - 2	Not Analyzed
GP-2 (7-8)	S	12.21.2020 14:35	7 - 8	Not Analyzed
GP-2 (9-10)	S	12.21.2020 14:40	9 - 10	Not Analyzed
GP-3 (1-2)	S	12.21.2020 14:45	1 - 2	Not Analyzed
GP-3 (7-8)	S	12.21.2020 15:00	7 - 8	Not Analyzed
GP-3 (9-10)	S	12.21.2020 15:05	9 - 10	Not Analyzed
GP-3 (11-12)	S	12.21.2020 15:10	11 - 12	Not Analyzed
GP-4 (1-2)	S	12.21.2020 15:15	1 - 2	Not Analyzed
GP-4 (7-8)	S	12.21.2020 15:30	7 - 8	Not Analyzed
GP-4 (9-10)	S	12.21.2020 15:35	9 - 10	Not Analyzed
GP-4 (11-12)	S	12.21.2020 15:40	11 - 12	Not Analyzed
GP-4 (12-13)	S	12.21.2020 15:45	12 - 13	Not Analyzed

CASE NARRATIVE

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Client Name: Terracon-Lubbock

Project Name: Aikman SWD

Project ID: *AR207018*
Work Order Number(s): *682364*

Report Date: *12.28.2020*
Date Received: *12.22.2020*

Sample receipt non conformances and comments:

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3146082 TPH by SW8015 Mod

Surrogate 1-Chlorooctane recovered above QC limits. Matrix interferences is suspected; data confirmed by re-analysis.
Samples affected are: 682364-002 SD.

Batch: LBA-3146094 BTEX by EPA 8021B

Lab Sample ID 682364-012 was randomly selected for Matrix Spike/Matrix Spike Duplicate (MS/MSD). Benzene, Ethylbenzene, Toluene, m,p-Xylenes , o-Xylene recovered below QC limits in the Matrix Spike Duplicate. Outlier/s are due to possible matrix interference. Samples in the analytical batch are: 682364-012, -017, -018.
The Laboratory Control Sample for Toluene, m,p-Xylenes , Benzene, Ethylbenzene, o-Xylene is within laboratory Control Limits, therefore the data was accepted.

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Certificate of Analytical Results 682364

Terracon-Lubbock, Lubbock, TX

Aikman SWD

Sample Id: **GP-1 (3-4)**
Lab Sample Id: 682364-002
Matrix: Soil
Date Collected: 12.21.2020 14:05
Date Received: 12.22.2020 17:02
Sample Depth: 3 - 4

Analytical Method: Chloride by EPA 300
Tech: CHE
Analyst: CHE
Seq Number: 3146077
Date Prep: 12.28.2020 08:15
Prep Method: E300P
% Moisture:
Basis: Wet Weight
SUB: T104704400-20-21

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**613**	5.04	mg/kg	12.28.2020 08:55		1

Analytical Method: TPH by SW8015 Mod
Tech: DVM
Analyst: DVM
Seq Number: 3146082
Date Prep: 12.24.2020 12:00
Prep Method: SW8015P
% Moisture:
Basis: Wet Weight
SUB: T104704400-20-21

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	mg/kg	12.25.2020 06:09	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9	mg/kg	12.25.2020 06:09	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	12.25.2020 06:09	U	1
Total TPH	PHC635	<49.9	49.9	mg/kg	12.25.2020 06:09	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	111	%	70-130	12.25.2020 06:09	
o-Terphenyl	84-15-1	114	%	70-130	12.25.2020 06:09	

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Certificate of Analytical Results 682364

Terracon-Lubbock, Lubbock, TX

Aikman SWD

Sample Id:	**GP-1 (3-4)**	Matrix:	Soil	Date Received:	12.22.2020 17:02
Lab Sample Id:	682364-002	Date Collected:	12.21.2020 14:05	Sample Depth:	3 - 4
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5035A
Tech:	KTL				
Analyst:	KTL	Date Prep:	12.24.2020 10:30	% Moisture:	
Seq Number:	3146067			Basis:	Wet Weight
				SUB:	T104704400-20-21

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	12.24.2020 18:23	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	12.24.2020 18:23	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	12.24.2020 18:23	U	1
m,p-Xylenes	179601-23-1	**0.00476**	0.00404	mg/kg	12.24.2020 18:23		1
o-Xylene	95-47-6	**0.00217**	0.00202	mg/kg	12.24.2020 18:23		1
Xylenes, Total	1330-20-7	**0.00693**	0.00202	mg/kg	12.24.2020 18:23		1
Total BTEX		**0.00693**	0.00202	mg/kg	12.24.2020 18:23		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	110	%	70-130	12.24.2020 18:23	
1,4-Difluorobenzene	540-36-3	92	%	70-130	12.24.2020 18:23	

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Certificate of Analytical Results 682364

Terracon-Lubbock, Lubbock, TX

Aikman SWD

Sample Id: **GP-1 (5-6)** Matrix: Soil Date Received:12.22.2020 17:02
Lab Sample Id: 682364-003 Date Collected: 12.21.2020 14:10 Sample Depth: 5 - 6

Analytical Method: Chloride by EPA 300 Prep Method: E300P
Tech: CHE
Analyst: CHE Date Prep: 12.28.2020 08:15 % Moisture:
Seq Number: 3146077 Basis: Wet Weight
SUB: T104704400-20-21

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<5.00	5.00	mg/kg	12.28.2020 13:35	U	1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
Tech: DVM
Analyst: DVM Date Prep: 12.24.2020 12:00 % Moisture:
Seq Number: 3146082 Basis: Wet Weight
SUB: T104704400-20-21

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	mg/kg	12.25.2020 07:14	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9	mg/kg	12.25.2020 07:14	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	12.25.2020 07:14	U	1
Total TPH	PHC635	<49.9	49.9	mg/kg	12.25.2020 07:14	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	114	%	70-130	12.25.2020 07:14	
o-Terphenyl	84-15-1	109	%	70-130	12.25.2020 07:14	

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Certificate of Analytical Results 682364

Terracon-Lubbock, Lubbock, TX

Aikman SWD

Sample Id:	**GP-1 (5-6)**	Matrix:	Soil	Date Received:	12.22.2020 17:02
Lab Sample Id:	682364-003	Date Collected:	12.21.2020 14:10	Sample Depth:	5 - 6
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5035A
Tech:	KTL				
Analyst:	KTL	Date Prep:	12.24.2020 10:30	% Moisture:	
Seq Number:	3146067			Basis:	Wet Weight
				SUB:	T104704400-20-21

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	12.24.2020 18:43	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	12.24.2020 18:43	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	12.24.2020 18:43	U	1
m,p-Xylenes	179601-23-1	**0.00470**	0.00398	mg/kg	12.24.2020 18:43		1
o-Xylene	95-47-6	**0.00238**	0.00199	mg/kg	12.24.2020 18:43		1
Xylenes, Total	1330-20-7	**0.00708**	0.00199	mg/kg	12.24.2020 18:43		1
Total BTEX		**0.00708**	0.00199	mg/kg	12.24.2020 18:43		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	96	%	70-130	12.24.2020 18:43	
4-Bromofluorobenzene	460-00-4	103	%	70-130	12.24.2020 18:43	

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Certificate of Analytical Results 682364

Terracon-Lubbock, Lubbock, TX

Aikman SWD

Sample Id:	**GP-2 (3-4)**	Matrix:	Soil	Date Received:	12.22.2020 17:02
Lab Sample Id:	682364-006	Date Collected:	12.21.2020 14:25	Sample Depth:	3 - 4

Analytical Method: Chloride by EPA 300 Prep Method: E300P

Tech: CHE

Analyst: CHE Date Prep: 12.28.2020 08:15 % Moisture:

Seq Number: 3146077 Basis: Wet Weight

SUB: T104704400-20-21

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**631**	4.98	mg/kg	12.28.2020 09:16		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P

Tech: DVM

Analyst: DVM Date Prep: 12.24.2020 12:00 % Moisture:

Seq Number: 3146082 Basis: Wet Weight

SUB: T104704400-20-21

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.8	49.8	mg/kg	12.25.2020 07:36	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.8	49.8	mg/kg	12.25.2020 07:36	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.8	49.8	mg/kg	12.25.2020 07:36	U	1
Total TPH	PHC635	<49.8	49.8	mg/kg	12.25.2020 07:36	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	122	%	70-130	12.25.2020 07:36	
o-Terphenyl	84-15-1	115	%	70-130	12.25.2020 07:36	

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Certificate of Analytical Results 682364

Terracon-Lubbock, Lubbock, TX

Aikman SWD

Sample Id: **GP-2 (3-4)**
Lab Sample Id: 682364-006

Matrix: Soil
Date Collected: 12.21.2020 14:25

Date Received:12.22.2020 17:02
Sample Depth: 3 - 4

Analytical Method: BTEX by EPA 8021B
Tech: KTL
Analyst: KTL
Seq Number: 3146067

Date Prep: 12.24.2020 10:30

Prep Method: SW5035A
% Moisture:
Basis: Wet Weight
SUB: T104704400-20-21

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	12.24.2020 19:04	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	12.24.2020 19:04	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	12.24.2020 19:04	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	12.24.2020 19:04	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	12.24.2020 19:04	U	1
Xylenes, Total	1330-20-7	<0.00200	0.00200	mg/kg	12.24.2020 19:04	U	1
Total BTEX		<0.00200	0.00200	mg/kg	12.24.2020 19:04	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	94	%	70-130	12.24.2020 19:04	
4-Bromofluorobenzene	460-00-4	112	%	70-130	12.24.2020 19:04	

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Certificate of Analytical Results 682364

Terracon-Lubbock, Lubbock, TX

Aikman SWD

Sample Id: **GP-2 (5-6)**
Lab Sample Id: 682364-007
Matrix: Soil
Date Collected: 12.21.2020 14:30
Date Received: 12.22.2020 17:02
Sample Depth: 5 - 6

Analytical Method: Chloride by EPA 300
Tech: CHE
Analyst: CHE
Seq Number: 3146077
Date Prep: 12.28.2020 08:15
Prep Method: E300P
% Moisture:
Basis: Wet Weight
SUB: T104704400-20-21

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**466**	4.98	mg/kg	12.28.2020 09:21		1

Analytical Method: TPH by SW8015 Mod
Tech: DVM
Analyst: DVM
Seq Number: 3146082
Date Prep: 12.24.2020 12:00
Prep Method: SW8015P
% Moisture:
Basis: Wet Weight
SUB: T104704400-20-21

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	mg/kg	12.25.2020 07:58	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9	mg/kg	12.25.2020 07:58	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	12.25.2020 07:58	U	1
Total TPH	PHC635	<49.9	49.9	mg/kg	12.25.2020 07:58	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	122	%	70-130	12.25.2020 07:58	
o-Terphenyl	84-15-1	116	%	70-130	12.25.2020 07:58	

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Certificate of Analytical Results 682364

Terracon-Lubbock, Lubbock, TX

Aikman SWD

Sample Id: **GP-2 (5-6)**
Lab Sample Id: 682364-007

Matrix: Soil
Date Collected: 12.21.2020 14:30

Date Received: 12.22.2020 17:02
Sample Depth: 5 - 6

Analytical Method: BTEX by EPA 8021B
Tech: KTL
Analyst: KTL
Seq Number: 3146067

Date Prep: 12.24.2020 10:30

Prep Method: SW5035A
% Moisture:
Basis: Wet Weight
SUB: T104704400-20-21

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	12.24.2020 19:24	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	12.24.2020 19:24	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	12.24.2020 19:24	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	12.24.2020 19:24	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	12.24.2020 19:24	U	1
Xylenes, Total	1330-20-7	<0.00200	0.00200	mg/kg	12.24.2020 19:24	U	1
Total BTEX		<0.00200	0.00200	mg/kg	12.24.2020 19:24	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	102	%	70-130	12.24.2020 19:24	
1,4-Difluorobenzene	540-36-3	91	%	70-130	12.24.2020 19:24	

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Certificate of Analytical Results 682364

Terracon-Lubbock, Lubbock, TX

Aikman SWD

Sample Id: **GP-3 (3-4)** Matrix: Soil Date Received:12.22.2020 17:02
Lab Sample Id: 682364-011 Date Collected: 12.21.2020 14:50 Sample Depth: 3 - 4

Analytical Method: Chloride by EPA 300 Prep Method: E300P
Tech: CHE
Analyst: CHE Date Prep: 12.28.2020 08:15 % Moisture:
Seq Number: 3146077 Basis: Wet Weight
SUB: T104704400-20-21

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**623**	5.01	mg/kg	12.28.2020 09:26		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
Tech: DVM
Analyst: DVM Date Prep: 12.24.2020 12:00 % Moisture:
Seq Number: 3146082 Basis: Wet Weight
SUB: T104704400-20-21

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.8	49.8	mg/kg	12.25.2020 08:21	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.8	49.8	mg/kg	12.25.2020 08:21	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.8	49.8	mg/kg	12.25.2020 08:21	U	1
Total TPH	PHC635	<49.8	49.8	mg/kg	12.25.2020 08:21	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	120	%	70-130	12.25.2020 08:21	
o-Terphenyl	84-15-1	113	%	70-130	12.25.2020 08:21	

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Certificate of Analytical Results 682364

Terracon-Lubbock, Lubbock, TX

Aikman SWD

Sample Id:	**GP-3 (3-4)**	Matrix:	Soil	Date Received:	12.22.2020 17:02
Lab Sample Id:	682364-011	Date Collected:	12.21.2020 14:50	Sample Depth:	3 - 4
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5035A
Tech:	KTL				
Analyst:	KTL	Date Prep:	12.24.2020 10:30	% Moisture:	
Seq Number:	3146067			Basis:	Wet Weight
				SUB:	T104704400-20-21

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	12.24.2020 19:45	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	12.24.2020 19:45	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	12.24.2020 19:45	U	1
m,p-Xylenes	179601-23-1	<0.00403	0.00403	mg/kg	12.24.2020 19:45	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	12.24.2020 19:45	U	1
Xylenes, Total	1330-20-7	<0.00202	0.00202	mg/kg	12.24.2020 19:45	U	1
Total BTEX		<0.00202	0.00202	mg/kg	12.24.2020 19:45	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	96	%	70-130	12.24.2020 19:45	
4-Bromofluorobenzene	460-00-4	111	%	70-130	12.24.2020 19:45	

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Certificate of Analytical Results 682364

Terracon-Lubbock, Lubbock, TX

Aikman SWD

Sample Id:	**GP-3 (5-6)**	Matrix:	Soil	Date Received:	12.22.2020 17:02
Lab Sample Id:	682364-012	Date Collected:	12.21.2020 14:55	Sample Depth:	5 - 6

Analytical Method: Chloride by EPA 300 Prep Method: E300P

Tech: CHE

Analyst: CHE Date Prep: 12.28.2020 08:15 % Moisture:

Seq Number: 3146077 Basis: Wet Weight

SUB: T104704400-20-21

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**491**	5.04	mg/kg	12.28.2020 09:42		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P

Tech: DVM

Analyst: DVM Date Prep: 12.24.2020 12:00 % Moisture:

Seq Number: 3146082 Basis: Wet Weight

SUB: T104704400-20-21

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	12.25.2020 08:44	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	12.25.2020 08:44	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	12.25.2020 08:44	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	12.25.2020 08:44	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	124	%	70-130	12.25.2020 08:44	
o-Terphenyl	84-15-1	116	%	70-130	12.25.2020 08:44	

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Terracon-Lubbock, Lubbock, TX

Aikman SWD

Sample Id:	**GP-3 (5-6)**	Matrix:	Soil	Date Received:	12.22.2020 17:02
Lab Sample Id:	682364-012	Date Collected:	12.21.2020 14:55	Sample Depth:	5 - 6
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5035A
Tech:	KTL				
Analyst:	KTL	Date Prep:	12.28.2020 10:00	% Moisture:	
Seq Number:	3146094			Basis:	Wet Weight
				SUB:	T104704400-20-21

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	12.28.2020 12:40	UX	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	12.28.2020 12:40	UX	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	12.28.2020 12:40	UX	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	12.28.2020 12:40	UX	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	12.28.2020 12:40	UX	1
Xylenes, Total	1330-20-7	<0.00199	0.00199	mg/kg	12.28.2020 12:40	U	1
Total BTEX		<0.00199	0.00199	mg/kg	12.28.2020 12:40	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	95	%	70-130	12.28.2020 12:40	
4-Bromofluorobenzene	460-00-4	104	%	70-130	12.28.2020 12:40	

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Certificate of Analytical Results 682364

Terracon-Lubbock, Lubbock, TX

Aikman SWD

Sample Id: **GP-4 (3-4)** Matrix: Soil Date Received:12.22.2020 17:02

Lab Sample Id: 682364-017 Date Collected: 12.21.2020 15:20 Sample Depth: 3 - 4

Analytical Method: Chloride by EPA 300 Prep Method: E300P

Tech: CHE

Analyst: CHE Date Prep: 12.28.2020 08:15 % Moisture:

Seq Number: 3146077 Basis: Wet Weight

SUB: T104704400-20-21

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**17.0**	5.03	mg/kg	12.28.2020 09:47		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P

Tech: DVM

Analyst: DVM Date Prep: 12.24.2020 12:00 % Moisture:

Seq Number: 3146082 Basis: Wet Weight

SUB: T104704400-20-21

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	12.25.2020 09:07	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	12.25.2020 09:07	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	12.25.2020 09:07	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	12.25.2020 09:07	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	106	%	70-130	12.25.2020 09:07	
o-Terphenyl	84-15-1	100	%	70-130	12.25.2020 09:07	

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Certificate of Analytical Results 682364

Terracon-Lubbock, Lubbock, TX

Aikman SWD

Sample Id: **GP-4 (3-4)**
Lab Sample Id: 682364-017

Matrix: Soil
Date Collected: 12.21.2020 15:20

Date Received:12.22.2020 17:02
Sample Depth: 3 - 4

Analytical Method: BTEX by EPA 8021B
Tech: KTL
Analyst: KTL
Seq Number: 3146094

Date Prep: 12.28.2020 10:00

Prep Method: SW5035A
% Moisture:
Basis: Wet Weight
SUB: T104704400-20-21

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00198	0.00198	mg/kg	12.28.2020 13:01	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	12.28.2020 13:01	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	12.28.2020 13:01	U	1
m,p-Xylenes	179601-23-1	<0.00396	0.00396	mg/kg	12.28.2020 13:01	U	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	12.28.2020 13:01	U	1
Xylenes, Total	1330-20-7	<0.00198	0.00198	mg/kg	12.28.2020 13:01	U	1
Total BTEX		<0.00198	0.00198	mg/kg	12.28.2020 13:01	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	106	%	70-130	12.28.2020 13:01	
1,4-Difluorobenzene	540-36-3	99	%	70-130	12.28.2020 13:01	

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Certificate of Analytical Results 682364

Terracon-Lubbock, Lubbock, TX

Aikman SWD

Sample Id: **GP-4 (5-6)**
Lab Sample Id: 682364-018
Matrix: Soil
Date Collected: 12.21.2020 15:25
Date Received: 12.22.2020 17:02
Sample Depth: 5 - 6

Analytical Method: Chloride by EPA 300
Tech: CHE
Analyst: CHE
Seq Number: 3146077
Date Prep: 12.28.2020 08:15
Prep Method: E300P
% Moisture:
Basis: Wet Weight
SUB: T104704400-20-21

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**6.60**	4.96	mg/kg	12.28.2020 09:52		1

Analytical Method: TPH by SW8015 Mod
Tech: DVM
Analyst: DVM
Seq Number: 3146082
Date Prep: 12.24.2020 12:00
Prep Method: SW8015P
% Moisture:
Basis: Wet Weight
SUB: T104704400-20-21

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	12.25.2020 09:31	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	12.25.2020 09:31	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	12.25.2020 09:31	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	12.25.2020 09:31	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	84	%	70-130	12.25.2020 09:31	
o-Terphenyl	84-15-1	83	%	70-130	12.25.2020 09:31	

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Certificate of Analytical Results 682364

Terracon-Lubbock, Lubbock, TX

Aikman SWD

Sample Id: **GP-4 (5-6)**
Lab Sample Id: 682364-018

Matrix: Soil
Date Collected: 12.21.2020 15:25

Date Received:12.22.2020 17:02
Sample Depth: 5 - 6

Analytical Method: BTEX by EPA 8021B
Tech: KTL
Analyst: KTL
Seq Number: 3146094

Date Prep: 12.28.2020 10:00

Prep Method: SW5035A
% Moisture:
Basis: Wet Weight
SUB: T104704400-20-21

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	12.28.2020 13:21	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	12.28.2020 13:21	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	12.28.2020 13:21	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	12.28.2020 13:21	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	12.28.2020 13:21	U	1
Xylenes, Total	1330-20-7	<0.00199	0.00199	mg/kg	12.28.2020 13:21	U	1
Total BTEX		<0.00199	0.00199	mg/kg	12.28.2020 13:21	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	107	%	70-130	12.28.2020 13:21	
1,4-Difluorobenzene	540-36-3	97	%	70-130	12.28.2020 13:21	

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Flagging Criteria

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

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

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

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

F RPD exceeded lab control limits.

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

U Analyte was not detected.

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

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

K Sample analyzed outside of recommended hold time.

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

** Surrogate recovered outside laboratory control limit.

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

RL Reporting Limit

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

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

DL Method Detection Limit

NC Non-Calculable

SMP Client Sample **BLK** Method Blank

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

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

+ NELAC certification not offered for this compound.

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

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QC Summary 682364

Terracon-Lubbock

Aikman SWD

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3146077 — Matrix: Solid — Date Prep: 12.28.2020
MB Sample Id: 7717925-1-BLK — LCS Sample Id: 7717925-1-BKS — LCSD Sample Id: 7717925-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<5.00	250	258	103	248	99	90-110	4	20	mg/kg	12.28.2020 08:45	

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3146077 — Matrix: Soil — Date Prep: 12.28.2020
Parent Sample Id: 682364-002 — MS Sample Id: 682364-002 S — MSD Sample Id: 682364-002 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	613	252	871	102	852	95	90-110	2	20	mg/kg	12.28.2020 09:01	

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3146077 — Matrix: Soil — Date Prep: 12.28.2020
Parent Sample Id: 682377-001 — MS Sample Id: 682377-001 S — MSD Sample Id: 682377-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<4.98	249	267	107	261	105	90-110	2	20	mg/kg	12.28.2020 10:13	

Analytical Method: TPH by SW8015 Mod — Prep Method: SW8015P
Seq Number: 3146082 — Matrix: Solid — Date Prep: 12.24.2020
MB Sample Id: 7717937-1-BLK — LCS Sample Id: 7717937-1-BKS — LCSD Sample Id: 7717937-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<50.0	1000	1080	108	1280	128	70-130	17	20	mg/kg	12.25.2020 05:27	
Diesel Range Organics (DRO)	<50.0	1000	974	97	955	96	70-130	2	20	mg/kg	12.25.2020 05:27	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	96		117		114		70-130	%	12.25.2020 05:27
o-Terphenyl	100		111		110		70-130	%	12.25.2020 05:27

Analytical Method: TPH by SW8015 Mod — Prep Method: SW8015P
Seq Number: 3146082 — Matrix: Solid — Date Prep: 12.24.2020
MB Sample Id: 7717937-1-BLK

Parameter	MB Result	Units	Analysis Date	Flag
Motor Oil Range Hydrocarbons (MRO)	<50.0	mg/kg	12.25.2020 05:05	

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

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

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

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QC Summary 682364

Terracon-Lubbock

Aikman SWD

Analytical Method: **TPH by SW8015 Mod** Prep Method: SW8015P
Seq Number: 3146082 Matrix: Soil Date Prep: 12.24.2020
Parent Sample Id: 682364-002 MS Sample Id: 682364-002 S MSD Sample Id: 682364-002 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<50.0	999	1090	109	1190	119	70-130	9	20	mg/kg	12.25.2020 06:30	
Diesel Range Organics (DRO)	<50.0	999	1030	103	1050	105	70-130	2	20	mg/kg	12.25.2020 06:30	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	111		136	**	70-130	%	12.25.2020 06:30
o-Terphenyl	109		109		70-130	%	12.25.2020 06:30

Analytical Method: **BTEX by EPA 8021B** Prep Method: SW5035A
Seq Number: 3146067 Matrix: Solid Date Prep: 12.24.2020
MB Sample Id: 7717932-1-BLK LCS Sample Id: 7717932-1-BKS LCSD Sample Id: 7717932-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00200	0.100	0.0835	84	0.0866	87	70-130	4	35	mg/kg	12.24.2020 10:55	
Toluene	<0.00200	0.100	0.0911	91	0.0931	93	70-130	2	35	mg/kg	12.24.2020 10:55	
Ethylbenzene	<0.00200	0.100	0.0965	97	0.0968	97	70-130	0	35	mg/kg	12.24.2020 10:55	
m,p-Xylenes	<0.00400	0.200	0.194	97	0.194	97	70-130	0	35	mg/kg	12.24.2020 10:55	
o-Xylene	<0.00200	0.100	0.0932	93	0.0942	94	70-130	1	35	mg/kg	12.24.2020 10:55	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	85		92		93		70-130	%	12.24.2020 10:55
4-Bromofluorobenzene	114		102		103		70-130	%	12.24.2020 10:55

Analytical Method: **BTEX by EPA 8021B** Prep Method: SW5035A
Seq Number: 3146094 Matrix: Solid Date Prep: 12.28.2020
MB Sample Id: 7717941-1-BLK LCS Sample Id: 7717941-1-BKS LCSD Sample Id: 7717941-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00200	0.100	0.0870	87	0.0976	98	70-130	11	35	mg/kg	12.28.2020 10:19	
Toluene	<0.00200	0.100	0.0835	84	0.0935	94	70-130	11	35	mg/kg	12.28.2020 10:19	
Ethylbenzene	<0.00200	0.100	0.0874	87	0.0975	98	70-130	11	35	mg/kg	12.28.2020 10:19	
m,p-Xylenes	<0.00400	0.200	0.173	87	0.193	97	70-130	11	35	mg/kg	12.28.2020 10:19	
o-Xylene	<0.00200	0.100	0.0863	86	0.0961	96	70-130	11	35	mg/kg	12.28.2020 10:19	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	92		100		101		70-130	%	12.28.2020 10:19
4-Bromofluorobenzene	110		97		97		70-130	%	12.28.2020 10:19

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

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

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

QC Summary 682364

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Terracon-Lubbock

Aikman SWD

Analytical Method: **BTEX by EPA 8021B** Prep Method: SW5035A
Seq Number: 3146067 Matrix: Soil Date Prep: 12.24.2020
Parent Sample Id: 682385-004 MS Sample Id: 682385-004 S MSD Sample Id: 682385-004 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00200	0.100	0.0717	72	0.0701	70	70-130	2	35	mg/kg	12.24.2020 11:37	
Toluene	<0.00200	0.100	0.0813	81	0.0792	79	70-130	3	35	mg/kg	12.24.2020 11:37	
Ethylbenzene	<0.00200	0.100	0.0813	81	0.0795	80	70-130	2	35	mg/kg	12.24.2020 11:37	
m,p-Xylenes	<0.00401	0.200	0.152	76	0.146	73	70-130	4	35	mg/kg	12.24.2020 11:37	
o-Xylene	<0.00200	0.100	0.0734	73	0.0699	70	70-130	5	35	mg/kg	12.24.2020 11:37	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	98		92		70-130	%	12.24.2020 11:37
4-Bromofluorobenzene	108		100		70-130	%	12.24.2020 11:37

Analytical Method: **BTEX by EPA 8021B** Prep Method: SW5035A
Seq Number: 3146094 Matrix: Soil Date Prep: 12.28.2020
Parent Sample Id: 682364-012 MS Sample Id: 682364-012 S MSD Sample Id: 682364-012 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00200	0.0998	0.0847	85	0.0636	64	70-130	28	35	mg/kg	12.28.2020 11:00	X
Toluene	<0.00200	0.0998	0.0815	82	0.0608	61	70-130	29	35	mg/kg	12.28.2020 11:00	X
Ethylbenzene	<0.00200	0.0998	0.0841	84	0.0627	63	70-130	29	35	mg/kg	12.28.2020 11:00	X
m,p-Xylenes	<0.00399	0.200	0.166	83	0.124	63	70-130	29	35	mg/kg	12.28.2020 11:00	X
o-Xylene	<0.00200	0.0998	0.0827	83	0.0618	62	70-130	29	35	mg/kg	12.28.2020 11:00	X

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	99		98		70-130	%	12.28.2020 11:00
4-Bromofluorobenzene	100		101		70-130	%	12.28.2020 11:00

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

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

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

Released to Imaging: 8/29/2023 1:29:02 PM
Received by OCD: 4/10/2023 1:07:45 PM

682764

CHAIN OF CUSTODY RECORD

Terracon

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

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

Project Number: AR207018
Project Name: Aikman SWD

ANALYSIS REQUESTED

LAB USE ONLY
DUE DATE:
TEMP OF COOLER WHEN RECEIVED (°C) 0.3/0.2
IK-4 on ICE
Page 1 of 2

Matrix	Date	Time	Comp	Grab	Identifying Marks of Sample(s)	Start Depth	End Depth	No. Type of Containers: 4 oz Glass	40 ml VOA	60 ml VOA	5035 kit	Chloride (EPA Method 300)	TPH Extended 8015	BTEX (EPA Method 8021B)	Hold				Lab Sample ID
S	12/21/2020	14:00		X	GP-1 (1-2)	1	2	X							X				1
S	12/21/2020	14:05		X	GP-1 (3-4)	3	4	X				X	X	X					2
S	12/21/2020	14:10		X	GP-1 (5-6)	5	6	X				X	X	X					3
S	12/21/2020	14:15		X	GP-1 (6-7)	6	7	X							X				4
S	12/21/2020	14:20		X	GP-2 (1-2)	1	2	X							X				5
S	12/21/2020	14:25		X	GP-2 (3-4)	3	4	X				X	X	X					6
S	12/21/2020	14:30		X	GP-2 (5-6)	5	6	X				X	X	X					7
S	12/21/2020	14:35		X	GP-2 (7-8)	7	8	X							X				8
S	12/21/2020	14:40		X	GP-2 (9-10)	9	10	X							X				9
S	12/21/2020	14:45		X	GP-3 (1-2)	1	2	X							X				10
S	12/21/2020	14:50		X	GP-3 (3-4)	3	4	X				X	X	X					11
S	12/21/2020	14:55		X	GP-3 (5-6)	5	6	X				X	X	X					12
S	12/21/2020	15:00		X	GP-3 (7-8)	7	8	X							X				13
S	12/21/2020	15:05		X	GP-3 (9-10)	9	10	X							X				14
S	12/21/2020	15:10		X	GP-3 (11-12)	11	12	X							X				15
S	12/21/2020	15:15		X	GP-4 (1-2)	1	2	X							X				16
S	12/21/2020	15:20		X	GP-4 (3-4)	3	4	X				X	X	X					17
S	12/21/2020	15:25		X	GP-4 (5-6)	5	6	X				X	X	X					18
S	12/21/2020	15:30		X	GP-4 (7-8)	7	8	X							X				19
S	12/21/2020	15:35		X	GP-4 (9-10)	9	10	X							X				20

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

TRRP Laboratory Review Checklist ☐ Yes ☐ No

Relinquished by (Signature)	Date:	Time:	Received by (Signature)	Date:	Time:
	12-22-20	5:02		12/22/20	1702
Relinquished by (Signature)	Date:	Time:	Received by (Signature)	Date:	Time:
Relinquished by (Signature)	Date:	Time:	Received by (Signature)	Date:	Time:
Relinquished by (Signature)	Date:	Time:	Received by (Signature)	Date:	Time:

NOTES: Client: Spur Energy Partners LLC

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

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

Released to Imaging: 8/29/2023 1:29:02 PM
Received by OCD: 4/10/2023 1:07:45 PM

682364

CHAIN OF CUSTODY RECORD

Terracon

Laboratory: Xenco
Address: 6701 Aberdeen
Lubbock, Texas 79424

Office Location: Lubbock
Phone:
Project Manager: J. Guesnier
Contact: J. Guesnier 806-544-9276
Sampler's Name: B. Mcbrayer
SRS #:
Sampler's Signature

Project Number: AR207018
Project Name: Aikman SWD

ANALYSIS REQUESTED

LAB USE ONLY
DUE DATE:
TEMP OF COOLER WHEN RECEIVED (°C): 0.3/0.2 IR-4 On ice

Page 2 of 2

Matrix	Date	Time	Comp	Grab	Identifying Marks of Sample(s)	Start Depth	End Depth	No. Type of Containers: 4 oz Glass	40 ml VOA	60 ml VOA	5035 kit	Chloride (EPA Method 300)	TPH Extended 8015	BTEX (EPA Method 8021B)	Hold				Lab Sample ID
S	12/21/2020	15:40		X	GP-4 (11-12)	11	12	X							X				21
S	12/21/2020	15:45		X	GP-4 (12-13)	12	13	X							X				22

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

TRRP Laboratory Review Checklist: ☐ Yes ☐ No

Relinquished by (Signature)	Date:	Time:	Received by (Signature)	Date:	Time:
	12-22-20	5:02	Teddy Rendon	12/22/20	1702

NOTES: Client: Spur Energy Partners LLC

e-mail results to:

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

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

Inter-Office Shipment

IOS Number : 75476

Date/Time: 12.23.2020
Lab# From: **Lubbock**
Lab# To: **Midland**

Created by: Randall Lee
Delivery Priority:
Air Bill No.:

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

Sample Id	Matrix	Client Sample Id	Sample Collection	Method	Method Name	Lab Due	HT Due	PM	Analytes	Sign
682364-002	S	GP-1 (3-4)	12.21.2020 14:05	SW8015MOD_NM	TPH by SW8015 Mod	12.24.2020	01.04.2021	JKR	PHCC10C28 PHCC28C3	
682364-002	S	GP-1 (3-4)	12.21.2020 14:05	SW8021B	BTEX by EPA 8021B	12.24.2020	01.04.2021	JKR	BR4FBZ BZ BZME EBZ	
682364-002	S	GP-1 (3-4)	12.21.2020 14:05	E300_CL	Chloride by EPA 300	12.24.2020	01.18.2021	JKR	CL	
682364-003	S	GP-1 (5-6)	12.21.2020 14:10	E300_CL	Chloride by EPA 300	12.24.2020	01.18.2021	JKR	CL	
682364-003	S	GP-1 (5-6)	12.21.2020 14:10	SW8021B	BTEX by EPA 8021B	12.24.2020	01.04.2021	JKR	BR4FBZ BZ BZME EBZ	
682364-003	S	GP-1 (5-6)	12.21.2020 14:10	SW8015MOD_NM	TPH by SW8015 Mod	12.24.2020	01.04.2021	JKR	PHCC10C28 PHCC28C3	
682364-006	S	GP-2 (3-4)	12.21.2020 14:25	SW8015MOD_NM	TPH by SW8015 Mod	12.24.2020	01.04.2021	JKR	PHCC10C28 PHCC28C3	
682364-006	S	GP-2 (3-4)	12.21.2020 14:25	E300_CL	Chloride by EPA 300	12.24.2020	01.18.2021	JKR	CL	
682364-006	S	GP-2 (3-4)	12.21.2020 14:25	SW8021B	BTEX by EPA 8021B	12.24.2020	01.04.2021	JKR	BR4FBZ BZ BZME EBZ	
682364-007	S	GP-2 (5-6)	12.21.2020 14:30	SW8015MOD_NM	TPH by SW8015 Mod	12.24.2020	01.04.2021	JKR	PHCC10C28 PHCC28C3	
682364-007	S	GP-2 (5-6)	12.21.2020 14:30	SW8021B	BTEX by EPA 8021B	12.24.2020	01.04.2021	JKR	BR4FBZ BZ BZME EBZ	
682364-007	S	GP-2 (5-6)	12.21.2020 14:30	E300_CL	Chloride by EPA 300	12.24.2020	01.18.2021	JKR	CL	
682364-011	S	GP-3 (3-4)	12.21.2020 14:50	E300_CL	Chloride by EPA 300	12.24.2020	01.18.2021	JKR	CL	
682364-011	S	GP-3 (3-4)	12.21.2020 14:50	SW8015MOD_NM	TPH by SW8015 Mod	12.24.2020	01.04.2021	JKR	PHCC10C28 PHCC28C3	
682364-011	S	GP-3 (3-4)	12.21.2020 14:50	SW8021B	BTEX by EPA 8021B	12.24.2020	01.04.2021	JKR	BR4FBZ BZ BZME EBZ	
682364-012	S	GP-3 (5-6)	12.21.2020 14:55	SW8021B	BTEX by EPA 8021B	12.24.2020	01.04.2021	JKR	BR4FBZ BZ BZME EBZ	
682364-012	S	GP-3 (5-6)	12.21.2020 14:55	E300_CL	Chloride by EPA 300	12.24.2020	01.18.2021	JKR	CL	
682364-012	S	GP-3 (5-6)	12.21.2020 14:55	SW8015MOD_NM	TPH by SW8015 Mod	12.24.2020	01.04.2021	JKR	PHCC10C28 PHCC28C3	
682364-017	S	GP-4 (3-4)	12.21.2020 15:20	SW8021B	BTEX by EPA 8021B	12.24.2020	01.04.2021	JKR	BR4FBZ BZ BZME EBZ	
682364-017	S	GP-4 (3-4)	12.21.2020 15:20	E300_CL	Chloride by EPA 300	12.24.2020	01.18.2021	JKR	CL	
682364-017	S	GP-4 (3-4)	12.21.2020 15:20	SW8015MOD_NM	TPH by SW8015 Mod	12.24.2020	01.04.2021	JKR	PHCC10C28 PHCC28C3	
682364-018	S	GP-4 (5-6)	12.21.2020 15:25	SW8021B	BTEX by EPA 8021B	12.24.2020	01.04.2021	JKR	BR4FBZ BZ BZME EBZ	
682364-018	S	GP-4 (5-6)	12.21.2020 15:25	E300_CL	Chloride by EPA 300	12.24.2020	01.18.2021	JKR	CL	
682364-018	S	GP-4 (5-6)	12.21.2020 15:25	SW8015MOD_NM	TPH by SW8015 Mod	12.24.2020	01.04.2021	JKR	PHCC10C28 PHCC28C3	

Inter-Office Shipment

IOS Number : 75476

Date/Time:	12.23.2020	Created by:	Randall Lee
Lab# From:	**Lubbock**	Delivery Priority:	
Lab# To:	**Midland**	Air Bill No.:	

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

Inter Office Shipment or Sample Comments:

Relinquished By: Teddy Randall Lee
Randall Lee

Date Relinquished: 12.23.2020

Received By: Jessica Kramer
Jessica Kramer

Date Received: 12.24.2020

Cooler Temperature: 1.2

Eurofins Xenco, LLC

Inter Office Report- Sample Receipt Checklist

Sent To: Midland

IOS #: 75476

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

Sent By: Randall Lee **Date Sent:** 12.23.2020 10.29 AM

Received By: Jessica Kramer **Date Received:** 12.24.2020 12.06 PM

Sample Receipt Checklist		Comments
#1 *Temperature of cooler(s)?	1.2	
#2 *Shipping container in good condition?	**Yes**	
#3 *Samples received with appropriate temperature?	**Yes**	
#4 *Custody Seals intact on shipping container/ cooler?	**Yes**	
#5 *Custody Seals Signed and dated for Containers/coolers	**Yes**	
#6 *IOS present?	**Yes**	
#7 Any missing/extra samples?	**No**	
#8 IOS agrees with sample label(s)/matrix?	**Yes**	
#9 Sample matrix/ properties agree with IOS?	**Yes**	
#10 Samples in proper container/ bottle?	**Yes**	
#11 Samples properly preserved?	**Yes**	
#12 Sample container(s) intact?	**Yes**	
#13 Sufficient sample amount for indicated test(s)?	**Yes**	
#14 All samples received within hold time?	**Yes**	

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

NonConformance:

Corrective Action Taken:

Nonconformance Documentation

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

Checklist reviewed by: Jessica Kramer Date: 12.24.2020

Jessica Kramer

Eurofins Xenco, LLC

Prelogin/Nonconformance Report- Sample Log-In

Client: Terracon-Lubbock

Date/ Time Received: 12.22.2020 05.02.00 PM

Work Order #: 682364

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

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

Analyst: PH Device/Lot#:

Checklist completed by: Teddy Randall Lee
Randall Lee
Date: 12.23.2020

Checklist reviewed by: Jessica Kramer
Jessica Kramer
Date: 12.23.2020

eurofins | Environment Testing America



ANALYTICAL REPORT

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

Laboratory Job ID: 820-668-1
Laboratory Sample Delivery Group: AR207018
Client Project/Site: Aikman SWD--Terracon

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

Attn: Joseph Guesnier

JKramer

Authorized for release by:
5/13/2021 4:08:15 PM

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

LINKS

Review your project results through TotalAccess

Have a Question? Ask The Expert

Visit us at: www.eurofinsus.com/Env

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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

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

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

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

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

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

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

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

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

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

JKramer

Jessica Kramer
Project Manager
5/13/2021 4:08:15 PM

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Released to Imaging: 8/29/2023 1:29:02 PM

Definitions/Glossary

Client: Terracon Consulting Eng & Scientists
Project/Site: Aikman SWD--Terracon

Job ID: 820-668-1
SDG: AR207018

Qualifiers

GC VOA

Qualifier	Qualifier Description
S1-	Surrogate recovery exceeds control limits, low biased.
S1+	Surrogate recovery exceeds control limits, high biased.
U	Indicates the analyte was analyzed for but not detected.

GC Semi VOA

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

HPLC/IC

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

Glossary

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

Case Narrative

Client: Terracon Consulting Eng & Scientists
Project/Site: Aikman SWD--Terracon

Job ID: 820-668-1
SDG: AR207018

Job ID: 820-668-1

Laboratory: Eurofins Xenco, Lubbock

Narrative

Job Narrative
820-668-1

Receipt
The samples were received on 5/11/2021 2:51 PM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 2.1°C

GC VOA
Method 8021B: Due to matrix, the initial run for sample 021 was performed at a dilution of 100X.

Method 8021B: Due to matrix, the initial run for sample 022 was performed at a dilution of 20X.

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

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

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

Client Sample Results

Client: Terracon Consulting Eng & Scientists
Project/Site: Aikman SWD--Terracon

Job ID: 820-668-1
SDG: AR207018

Client Sample ID: HA-1 (0-0.5)

Date Collected: 05/10/21 12:00
Date Received: 05/11/21 14:51

Lab Sample ID: 820-668-1
Matrix: Solid

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		05/12/21 09:29	05/12/21 16:32	1
Toluene	<0.00199	U	0.00199		mg/Kg		05/12/21 09:29	05/12/21 16:32	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		05/12/21 09:29	05/12/21 16:32	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		05/12/21 09:29	05/12/21 16:32	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		05/12/21 09:29	05/12/21 16:32	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		05/12/21 09:29	05/12/21 16:32	1
Total BTEX	<0.00398	U	0.00398		mg/Kg		05/12/21 09:29	05/12/21 16:32	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*107*		*70 - 130*	*05/12/21 09:29*	*05/12/21 16:32*	*1*
1,4-Difluorobenzene (Surr)	*2*	*S1-*	*70 - 130*	*05/12/21 09:29*	*05/12/21 16:32*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		05/12/21 13:24	05/12/21 21:49	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		05/12/21 13:24	05/12/21 21:49	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		05/12/21 13:24	05/12/21 21:49	1
Total TPH	<50.0	U	50.0		mg/Kg		05/12/21 13:24	05/12/21 21:49	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*104*		*70 - 130*	*05/12/21 13:24*	*05/12/21 21:49*	*1*
o-Terphenyl	*105*		*70 - 130*	*05/12/21 13:24*	*05/12/21 21:49*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**315**	**F1**	25.0		mg/Kg			05/13/21 00:29	5

Client Sample ID: HA-1 (0.5-1)

Date Collected: 05/10/21 12:02
Date Received: 05/11/21 14:51

Lab Sample ID: 820-668-2
Matrix: Solid

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00201	U	0.00201		mg/Kg		05/12/21 09:29	05/12/21 16:53	1
Toluene	<0.00201	U	0.00201		mg/Kg		05/12/21 09:29	05/12/21 16:53	1
Ethylbenzene	**0.00537**		0.00201		mg/Kg		05/12/21 09:29	05/12/21 16:53	1
m-Xylene & p-Xylene	**0.0239**		0.00402		mg/Kg		05/12/21 09:29	05/12/21 16:53	1
o-Xylene	**0.00922**		0.00201		mg/Kg		05/12/21 09:29	05/12/21 16:53	1
Xylenes, Total	**0.0331**		0.00402		mg/Kg		05/12/21 09:29	05/12/21 16:53	1
Total BTEX	**0.0385**		0.00402		mg/Kg		05/12/21 09:29	05/12/21 16:53	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*102*		*70 - 130*	*05/12/21 09:29*	*05/12/21 16:53*	*1*
1,4-Difluorobenzene (Surr)	*103*		*70 - 130*	*05/12/21 09:29*	*05/12/21 16:53*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.8	U	49.8		mg/Kg		05/12/21 13:24	05/12/21 22:10	1

Client Sample Results

Client: Terracon Consulting Eng & Scientists
Project/Site: Aikman SWD--Terracon

Job ID: 820-668-1
SDG: AR207018

Client Sample ID: HA-1 (0.5-1)

Lab Sample ID: 820-668-2
Matrix: Solid
Date Collected: 05/10/21 12:02
Date Received: 05/11/21 14:51

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (Over C10-C28)	1170		49.8		mg/Kg		05/12/21 13:24	05/12/21 22:10	1
OII Range Organics (Over C28-C36)	<49.8	U	49.8		mg/Kg		05/12/21 13:24	05/12/21 22:10	1
Total TPH	1170		49.8		mg/Kg		05/12/21 13:24	05/12/21 22:10	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*111*		*70 - 130*	*05/12/21 13:24*	*05/12/21 22:10*	*1*
o-Terphenyl	*107*		*70 - 130*	*05/12/21 13:24*	*05/12/21 22:10*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	2830		25.2		mg/Kg			05/13/21 00:45	5

Client Sample ID: HA-1 (1.5-2)

Lab Sample ID: 820-668-3
Matrix: Solid
Date Collected: 05/10/21 12:04
Date Received: 05/11/21 14:51

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.0796		0.0401		mg/Kg		05/12/21 09:29	05/12/21 17:14	20
Toluene	2.02		0.0401		mg/Kg		05/12/21 09:29	05/12/21 17:14	20
Ethylbenzene	0.284		0.0401		mg/Kg		05/12/21 09:29	05/12/21 17:14	20
m-Xylene & p-Xylene	2.17		0.0802		mg/Kg		05/12/21 09:29	05/12/21 17:14	20
o-Xylene	0.227		0.0401		mg/Kg		05/12/21 09:29	05/12/21 17:14	20
Xylenes, Total	2.40		0.0802		mg/Kg		05/12/21 09:29	05/12/21 17:14	20
Total BTEX	4.78		0.0802		mg/Kg		05/12/21 09:29	05/12/21 17:14	20

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*140*	*S1+*	*70 - 130*	*05/12/21 09:29*	*05/12/21 17:14*	*20*
1,4-Difluorobenzene (Surr)	*115*		*70 - 130*	*05/12/21 09:29*	*05/12/21 17:14*	*20*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	246		50.0		mg/Kg		05/12/21 13:24	05/12/21 22:31	1
Diesel Range Organics (Over C10-C28)	1790		50.0		mg/Kg		05/12/21 13:24	05/12/21 22:31	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		05/12/21 13:24	05/12/21 22:31	1
Total TPH	2040		50.0		mg/Kg		05/12/21 13:24	05/12/21 22:31	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*107*		*70 - 130*	*05/12/21 13:24*	*05/12/21 22:31*	*1*
o-Terphenyl	*99*		*70 - 130*	*05/12/21 13:24*	*05/12/21 22:31*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	189		5.05		mg/Kg			05/13/21 00:50	1

Client Sample Results

Client: Terracon Consulting Eng & Scientists
Project/Site: Aikman SWD--Terracon

Job ID: 820-668-1
SDG: AR207018

Client Sample ID: HA-1 (3.5-4)

Lab Sample ID: 820-668-4
Matrix: Solid
Date Collected: 05/10/21 12:06
Date Received: 05/11/21 14:51

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.221		0.0404		mg/Kg		05/12/21 09:29	05/12/21 17:34	20
Toluene	0.305		0.0404		mg/Kg		05/12/21 09:29	05/12/21 17:34	20
Ethylbenzene	0.286		0.0404		mg/Kg		05/12/21 09:29	05/12/21 17:34	20
m-Xylene & p-Xylene	5.88		0.0808		mg/Kg		05/12/21 09:29	05/12/21 17:34	20
o-Xylene	3.77		0.0404		mg/Kg		05/12/21 09:29	05/12/21 17:34	20
Xylenes, Total	9.65		0.0808		mg/Kg		05/12/21 09:29	05/12/21 17:34	20
Total BTEX	10.5		0.0808		mg/Kg		05/12/21 09:29	05/12/21 17:34	20

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*191*	*S1+*	*70 - 130*	*05/12/21 09:29*	*05/12/21 17:34*	*20*
1,4-Difluorobenzene (Surr)	*0.3*	*S1-*	*70 - 130*	*05/12/21 09:29*	*05/12/21 17:34*	*20*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	389		49.9		mg/Kg		05/12/21 13:24	05/12/21 22:59	1
Diesel Range Organics (Over C10-C28)	2050		49.9		mg/Kg		05/12/21 13:24	05/12/21 22:59	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		05/12/21 13:24	05/12/21 22:59	1
Total TPH	2440		49.9		mg/Kg		05/12/21 13:24	05/12/21 22:59	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*106*		*70 - 130*	*05/12/21 13:24*	*05/12/21 22:59*	*1*
o-Terphenyl	*98*		*70 - 130*	*05/12/21 13:24*	*05/12/21 22:59*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	256		5.02		mg/Kg			05/13/21 00:56	1

Client Sample ID: HA-1 (4.5-5)

Lab Sample ID: 820-668-5
Matrix: Solid
Date Collected: 05/10/21 12:08
Date Received: 05/11/21 14:51

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.266		0.0404		mg/Kg		05/12/21 09:29	05/12/21 18:59	20
Toluene	0.953		0.0404		mg/Kg		05/12/21 09:29	05/12/21 18:59	20
Ethylbenzene	8.65		0.202		mg/Kg		05/12/21 09:29	05/13/21 09:05	100
m-Xylene & p-Xylene	24.2		0.404		mg/Kg		05/12/21 09:29	05/13/21 09:05	100
o-Xylene	8.31		0.202		mg/Kg		05/12/21 09:29	05/13/21 09:05	100
Xylenes, Total	32.5		0.404		mg/Kg		05/12/21 09:29	05/13/21 09:05	100
Total BTEX	42.3		0.404		mg/Kg		05/12/21 09:29	05/13/21 09:05	100

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*378*	*S1+*	*70 - 130*	*05/12/21 09:29*	*05/12/21 18:59*	*20*
1,4-Difluorobenzene (Surr)	*117*		*70 - 130*	*05/12/21 09:29*	*05/12/21 18:59*	*20*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	722		49.8		mg/Kg		05/12/21 13:24	05/12/21 23:30	1

Client Sample Results

Client: Terracon Consulting Eng & Scientists
Project/Site: Aikman SWD--Terracon

Job ID: 820-668-1
SDG: AR207018

Client Sample ID: HA-1 (4.5-5)

Lab Sample ID: 820-668-5
Matrix: Solid
Date Collected: 05/10/21 12:08
Date Received: 05/11/21 14:51

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (Over C10-C28)	**2300**		49.8		mg/Kg		05/12/21 13:24	05/12/21 23:30	1
OII Range Organics (Over C28-C36)	<49.8	U	49.8		mg/Kg		05/12/21 13:24	05/12/21 23:30	1
Total TPH	**3020**		49.8		mg/Kg		05/12/21 13:24	05/12/21 23:30	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*113*		*70 - 130*	*05/12/21 13:24*	*05/12/21 23:30*	*1*
o-Terphenyl	*97*		*70 - 130*	*05/12/21 13:24*	*05/12/21 23:30*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**102**		4.99		mg/Kg			05/13/21 01:01	1

Client Sample ID: HA-2 (0-0.5)

Lab Sample ID: 820-668-6
Matrix: Solid
Date Collected: 05/10/21 12:10
Date Received: 05/11/21 14:51

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	**0.0617**		0.0400		mg/Kg		05/12/21 09:29	05/12/21 19:19	20
Toluene	**0.214**		0.0400		mg/Kg		05/12/21 09:29	05/12/21 19:19	20
Ethylbenzene	**0.414**		0.0400		mg/Kg		05/12/21 09:29	05/12/21 19:19	20
m-Xylene & p-Xylene	**0.746**		0.0800		mg/Kg		05/12/21 09:29	05/12/21 19:19	20
o-Xylene	**0.293**		0.0400		mg/Kg		05/12/21 09:29	05/12/21 19:19	20
Xylenes, Total	**1.04**		0.0800		mg/Kg		05/12/21 09:29	05/12/21 19:19	20
Total BTEX	**1.73**		0.0800		mg/Kg		05/12/21 09:29	05/12/21 19:19	20

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*97*		*70 - 130*	*05/12/21 09:29*	*05/12/21 19:19*	*20*
1,4-Difluorobenzene (Surr)	*112*		*70 - 130*	*05/12/21 09:29*	*05/12/21 19:19*	*20*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.7	U	49.7		mg/Kg		05/12/21 13:24	05/13/21 00:02	1
Diesel Range Organics (Over C10-C28)	**247**		49.7		mg/Kg		05/12/21 13:24	05/13/21 00:02	1
OII Range Organics (Over C28-C36)	<49.7	U	49.7		mg/Kg		05/12/21 13:24	05/13/21 00:02	1
Total TPH	**247**		49.7		mg/Kg		05/12/21 13:24	05/13/21 00:02	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*95*		*70 - 130*	*05/12/21 13:24*	*05/13/21 00:02*	*1*
o-Terphenyl	*96*		*70 - 130*	*05/12/21 13:24*	*05/13/21 00:02*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**8020**		99.4		mg/Kg			05/13/21 01:17	20

Client Sample Results

Client: Terracon Consulting Eng & Scientists
Project/Site: Aikman SWD--Terracon

Job ID: 820-668-1
SDG: AR207018

Client Sample ID: HA-2 (0.5-1)

Lab Sample ID: 820-668-7
Matrix: Solid
Date Collected: 05/10/21 12:12
Date Received: 05/11/21 14:51

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.0398	U	0.0398		mg/Kg		05/12/21 09:29	05/12/21 19:40	20
Toluene	<0.0398	U	0.0398		mg/Kg		05/12/21 09:29	05/12/21 19:40	20
Ethylbenzene	<0.0398	U	0.0398		mg/Kg		05/12/21 09:29	05/12/21 19:40	20
m-Xylene & p-Xylene	**0.101**		0.0797		mg/Kg		05/12/21 09:29	05/12/21 19:40	20
o-Xylene	<0.0398	U	0.0398		mg/Kg		05/12/21 09:29	05/12/21 19:40	20
Xylenes, Total	**0.101**		0.0797		mg/Kg		05/12/21 09:29	05/12/21 19:40	20
Total BTEX	**0.101**		0.0797		mg/Kg		05/12/21 09:29	05/12/21 19:40	20

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*96*		*70 - 130*	*05/12/21 09:29*	*05/12/21 19:40*	*20*
1,4-Difluorobenzene (Surr)	*110*		*70 - 130*	*05/12/21 09:29*	*05/12/21 19:40*	*20*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9		mg/Kg		05/12/21 13:24	05/13/21 00:23	1
Diesel Range Organics (Over C10-C28)	**181**		49.9		mg/Kg		05/12/21 13:24	05/13/21 00:23	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		05/12/21 13:24	05/13/21 00:23	1
Total TPH	**181**		49.9		mg/Kg		05/12/21 13:24	05/13/21 00:23	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*105*		*70 - 130*	*05/12/21 13:24*	*05/13/21 00:23*	*1*
o-Terphenyl	*105*		*70 - 130*	*05/12/21 13:24*	*05/13/21 00:23*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**10300**		99.0		mg/Kg			05/13/21 01:23	20

Client Sample ID: HA-2 (1.5-2)

Lab Sample ID: 820-668-8
Matrix: Solid
Date Collected: 05/10/21 12:14
Date Received: 05/11/21 14:51

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		05/12/21 09:29	05/13/21 08:31	1
Toluene	<0.00200	U	0.00200		mg/Kg		05/12/21 09:29	05/13/21 08:31	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		05/12/21 09:29	05/13/21 08:31	1
m-Xylene & p-Xylene	<0.00399	U	0.00399		mg/Kg		05/12/21 09:29	05/13/21 08:31	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		05/12/21 09:29	05/13/21 08:31	1
Xylenes, Total	<0.00399	U	0.00399		mg/Kg		05/12/21 09:29	05/13/21 08:31	1
Total BTEX	<0.00399	U	0.00399		mg/Kg		05/12/21 09:29	05/13/21 08:31	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*110*		*70 - 130*	*05/12/21 09:29*	*05/13/21 08:31*	*1*
1,4-Difluorobenzene (Surr)	*131*	*S1+*	*70 - 130*	*05/12/21 09:29*	*05/13/21 08:31*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	**606**	**F1**	49.7		mg/Kg		05/12/21 13:24	05/12/21 20:47	1

Eurofins Xenco, Lubbock

Client Sample Results

Client: Terracon Consulting Eng & Scientists
Project/Site: Aikman SWD--Terracon

Job ID: 820-668-1
SDG: AR207018

Client Sample ID: HA-2 (1.5-2)

Lab Sample ID: 820-668-8
Matrix: Solid
Date Collected: 05/10/21 12:14
Date Received: 05/11/21 14:51

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (Over C10-C28)	<49.7	U	49.7		mg/Kg		05/12/21 13:24	05/12/21 20:47	1
OII Range Organics (Over C28-C36)	<49.7	U	49.7		mg/Kg		05/12/21 13:24	05/12/21 20:47	1
Total TPH	**606**	**F1**	49.7		mg/Kg		05/12/21 13:24	05/12/21 20:47	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*116*		*70 - 130*	*05/12/21 13:24*	*05/12/21 20:47*	*1*
o-Terphenyl	*121*		*70 - 130*	*05/12/21 13:24*	*05/12/21 20:47*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**3300**		24.8		mg/Kg			05/13/21 01:28	5

Client Sample ID: HA-2 (3.5-4)

Lab Sample ID: 820-668-9
Matrix: Solid
Date Collected: 05/10/21 12:16
Date Received: 05/11/21 14:51

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	**0.00202**		0.00200		mg/Kg		05/12/21 09:29	05/13/21 08:52	1
Toluene	<0.00200	U	0.00200		mg/Kg		05/12/21 09:29	05/13/21 08:52	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		05/12/21 09:29	05/13/21 08:52	1
m-Xylene & p-Xylene	<0.00399	U	0.00399		mg/Kg		05/12/21 09:29	05/13/21 08:52	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		05/12/21 09:29	05/13/21 08:52	1
Xylenes, Total	<0.00399	U	0.00399		mg/Kg		05/12/21 09:29	05/13/21 08:52	1
Total BTEX	<0.00399	U	0.00399		mg/Kg		05/12/21 09:29	05/13/21 08:52	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*99*		*70 - 130*	*05/12/21 09:29*	*05/13/21 08:52*	*1*
1,4-Difluorobenzene (Surr)	*114*		*70 - 130*	*05/12/21 09:29*	*05/13/21 08:52*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		05/12/21 13:24	05/13/21 00:44	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		05/12/21 13:24	05/13/21 00:44	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		05/12/21 13:24	05/13/21 00:44	1
Total TPH	<50.0	U	50.0		mg/Kg		05/12/21 13:24	05/13/21 00:44	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*106*		*70 - 130*	*05/12/21 13:24*	*05/13/21 00:44*	*1*
o-Terphenyl	*107*		*70 - 130*	*05/12/21 13:24*	*05/13/21 00:44*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**918**		5.04		mg/Kg			05/13/21 01:33	1

Client Sample Results

Client: Terracon Consulting Eng & Scientists
Project/Site: Aikman SWD--Terracon

Job ID: 820-668-1
SDG: AR207018

Client Sample ID: HA-2 (4.5-5)

Lab Sample ID: 820-668-10
Matrix: Solid
Date Collected: 05/10/21 12:18
Date Received: 05/11/21 14:51

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00198	U	0.00198		mg/Kg		05/12/21 09:29	05/13/21 09:13	1
Toluene	<0.00198	U	0.00198		mg/Kg		05/12/21 09:29	05/13/21 09:13	1
Ethylbenzene	<0.00198	U	0.00198		mg/Kg		05/12/21 09:29	05/13/21 09:13	1
m-Xylene & p-Xylene	<0.00396	U	0.00396		mg/Kg		05/12/21 09:29	05/13/21 09:13	1
o-Xylene	<0.00198	U	0.00198		mg/Kg		05/12/21 09:29	05/13/21 09:13	1
Xylenes, Total	<0.00396	U	0.00396		mg/Kg		05/12/21 09:29	05/13/21 09:13	1
Total BTEX	<0.00396	U	0.00396		mg/Kg		05/12/21 09:29	05/13/21 09:13	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*111*		*70 - 130*	*05/12/21 09:29*	*05/13/21 09:13*	*1*
1,4-Difluorobenzene (Surr)	*124*		*70 - 130*	*05/12/21 09:29*	*05/13/21 09:13*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.8	U	49.8		mg/Kg		05/12/21 13:24	05/13/21 01:04	1
Diesel Range Organics (Over C10-C28)	<49.8	U	49.8		mg/Kg		05/12/21 13:24	05/13/21 01:04	1
Oil Range Organics (Over C28-C36)	<49.8	U	49.8		mg/Kg		05/12/21 13:24	05/13/21 01:04	1
Total TPH	<49.8	U	49.8		mg/Kg		05/12/21 13:24	05/13/21 01:04	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*105*		*70 - 130*	*05/12/21 13:24*	*05/13/21 01:04*	*1*
o-Terphenyl	*105*		*70 - 130*	*05/12/21 13:24*	*05/13/21 01:04*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**991**		5.03		mg/Kg			05/13/21 01:39	1

Client Sample ID: HA-3 (0-0.5)

Lab Sample ID: 820-668-11
Matrix: Solid
Date Collected: 05/10/21 12:20
Date Received: 05/11/21 14:51

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		05/12/21 09:29	05/13/21 09:33	1
Toluene	<0.00200	U	0.00200		mg/Kg		05/12/21 09:29	05/13/21 09:33	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		05/12/21 09:29	05/13/21 09:33	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		05/12/21 09:29	05/13/21 09:33	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		05/12/21 09:29	05/13/21 09:33	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		05/12/21 09:29	05/13/21 09:33	1
Total BTEX	<0.00400	U	0.00400		mg/Kg		05/12/21 09:29	05/13/21 09:33	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*100*		*70 - 130*	*05/12/21 09:29*	*05/13/21 09:33*	*1*
1,4-Difluorobenzene (Surr)	*117*		*70 - 130*	*05/12/21 09:29*	*05/13/21 09:33*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9		mg/Kg		05/12/21 13:24	05/13/21 01:46	1

Client Sample Results

Client: Terracon Consulting Eng & Scientists
Project/Site: Aikman SWD--Terracon

Job ID: 820-668-1
SDG: AR207018

Client Sample ID: HA-3 (0-0.5)

Lab Sample ID: 820-668-11
Matrix: Solid
Date Collected: 05/10/21 12:20
Date Received: 05/11/21 14:51

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (Over C10-C28)	**103**		49.9		mg/Kg		05/12/21 13:24	05/13/21 01:46	1
OII Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		05/12/21 13:24	05/13/21 01:46	1
Total TPH	**103**		49.9		mg/Kg		05/12/21 13:24	05/13/21 01:46	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*106*		*70 - 130*	*05/12/21 13:24*	*05/13/21 01:46*	*1*
o-Terphenyl	*106*		*70 - 130*	*05/12/21 13:24*	*05/13/21 01:46*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**358**	**F1**	25.0		mg/Kg			05/13/21 01:44	5

Client Sample ID: HA-3 (0.5-1)

Lab Sample ID: 820-668-12
Matrix: Solid
Date Collected: 05/10/21 12:22
Date Received: 05/11/21 14:51

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	**0.618**		0.0397		mg/Kg		05/12/21 09:29	05/13/21 09:54	20
Toluene	**0.401**		0.0397		mg/Kg		05/12/21 09:29	05/13/21 09:54	20
Ethylbenzene	**0.0595**		0.0397		mg/Kg		05/12/21 09:29	05/13/21 09:54	20
m-Xylene & p-Xylene	**0.126**		0.0794		mg/Kg		05/12/21 09:29	05/13/21 09:54	20
o-Xylene	**0.109**		0.0397		mg/Kg		05/12/21 09:29	05/13/21 09:54	20
Xylenes, Total	**0.235**		0.0794		mg/Kg		05/12/21 09:29	05/13/21 09:54	20
Total BTEX	**1.31**		0.0794		mg/Kg		05/12/21 09:29	05/13/21 09:54	20

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*104*		*70 - 130*	*05/12/21 09:29*	*05/13/21 09:54*	*20*
1,4-Difluorobenzene (Surr)	*114*		*70 - 130*	*05/12/21 09:29*	*05/13/21 09:54*	*20*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		05/12/21 13:24	05/13/21 02:07	1
Diesel Range Organics (Over C10-C28)	**457**		50.0		mg/Kg		05/12/21 13:24	05/13/21 02:07	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		05/12/21 13:24	05/13/21 02:07	1
Total TPH	**457**		50.0		mg/Kg		05/12/21 13:24	05/13/21 02:07	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*103*		*70 - 130*	*05/12/21 13:24*	*05/13/21 02:07*	*1*
o-Terphenyl	*105*		*70 - 130*	*05/12/21 13:24*	*05/13/21 02:07*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**265**		24.9		mg/Kg			05/13/21 02:00	5

Client Sample Results

Client: Terracon Consulting Eng & Scientists
Project/Site: Aikman SWD--Terracon

Job ID: 820-668-1
SDG: AR207018

Client Sample ID: HA-3 (1.5-2)

Lab Sample ID: 820-668-13

Date Collected: 05/10/21 12:24
Matrix: Solid
Date Received: 05/11/21 14:51

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		05/12/21 09:29	05/13/21 10:15	1
Toluene	<0.00199	U	0.00199		mg/Kg		05/12/21 09:29	05/13/21 10:15	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		05/12/21 09:29	05/13/21 10:15	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		05/12/21 09:29	05/13/21 10:15	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		05/12/21 09:29	05/13/21 10:15	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		05/12/21 09:29	05/13/21 10:15	1
Total BTEX	<0.00398	U	0.00398		mg/Kg		05/12/21 09:29	05/13/21 10:15	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*107*		*70 - 130*	*05/12/21 09:29*	*05/13/21 10:15*	*1*
1,4-Difluorobenzene (Surr)	*114*		*70 - 130*	*05/12/21 09:29*	*05/13/21 10:15*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9		mg/Kg		05/12/21 13:24	05/13/21 02:27	1
Diesel Range Organics (Over C10-C28)	**61.6**		49.9		mg/Kg		05/12/21 13:24	05/13/21 02:27	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		05/12/21 13:24	05/13/21 02:27	1
Total TPH	**61.6**		49.9		mg/Kg		05/12/21 13:24	05/13/21 02:27	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*101*		*70 - 130*	*05/12/21 13:24*	*05/13/21 02:27*	*1*
o-Terphenyl	*103*		*70 - 130*	*05/12/21 13:24*	*05/13/21 02:27*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**993**		24.8		mg/Kg			05/13/21 02:06	5

Client Sample ID: HA-3 (3.5-4)

Lab Sample ID: 820-668-14

Date Collected: 05/10/21 12:26
Matrix: Solid
Date Received: 05/11/21 14:51

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		05/12/21 09:29	05/13/21 10:35	1
Toluene	<0.00199	U	0.00199		mg/Kg		05/12/21 09:29	05/13/21 10:35	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		05/12/21 09:29	05/13/21 10:35	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		05/12/21 09:29	05/13/21 10:35	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		05/12/21 09:29	05/13/21 10:35	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		05/12/21 09:29	05/13/21 10:35	1
Total BTEX	<0.00398	U	0.00398		mg/Kg		05/12/21 09:29	05/13/21 10:35	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*117*		*70 - 130*	*05/12/21 09:29*	*05/13/21 10:35*	*1*
1,4-Difluorobenzene (Surr)	*1*	*S1-*	*70 - 130*	*05/12/21 09:29*	*05/13/21 10:35*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9		mg/Kg		05/12/21 13:24	05/13/21 02:48	1

Client Sample Results

Client: Terracon Consulting Eng & Scientists
Project/Site: Aikman SWD--Terracon

Job ID: 820-668-1
SDG: AR207018

Client Sample ID: HA-3 (3.5-4)

Lab Sample ID: 820-668-14
Matrix: Solid
Date Collected: 05/10/21 12:26
Date Received: 05/11/21 14:51

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		05/12/21 13:24	05/13/21 02:48	1
OII Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		05/12/21 13:24	05/13/21 02:48	1
Total TPH	<49.9	U	49.9		mg/Kg		05/12/21 13:24	05/13/21 02:48	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*101*		*70 - 130*	*05/12/21 13:24*	*05/13/21 02:48*	*1*
o-Terphenyl	*100*		*70 - 130*	*05/12/21 13:24*	*05/13/21 02:48*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**8940**		49.9		mg/Kg			05/13/21 02:22	10

Client Sample ID: HA-3 (4.5-5)

Lab Sample ID: 820-668-15
Matrix: Solid
Date Collected: 05/10/21 12:28
Date Received: 05/11/21 14:51

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		05/12/21 13:07	05/12/21 17:12	1
Toluene	<0.00199	U	0.00199		mg/Kg		05/12/21 13:07	05/12/21 17:12	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		05/12/21 13:07	05/12/21 17:12	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		05/12/21 13:07	05/12/21 17:12	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		05/12/21 13:07	05/12/21 17:12	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		05/12/21 13:07	05/12/21 17:12	1
Total BTEX	<0.00398	U	0.00398		mg/Kg		05/12/21 13:07	05/12/21 17:12	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*121*		*70 - 130*	*05/12/21 13:07*	*05/12/21 17:12*	*1*
1,4-Difluorobenzene (Surr)	*98*		*70 - 130*	*05/12/21 13:07*	*05/12/21 17:12*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		05/12/21 13:24	05/13/21 03:09	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		05/12/21 13:24	05/13/21 03:09	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		05/12/21 13:24	05/13/21 03:09	1
Total TPH	<50.0	U	50.0		mg/Kg		05/12/21 13:24	05/13/21 03:09	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*103*		*70 - 130*	*05/12/21 13:24*	*05/13/21 03:09*	*1*
o-Terphenyl	*105*		*70 - 130*	*05/12/21 13:24*	*05/13/21 03:09*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**6410**		49.7		mg/Kg			05/13/21 02:27	10

Client Sample Results

Client: Terracon Consulting Eng & Scientists
Project/Site: Aikman SWD--Terracon

Job ID: 820-668-1
SDG: AR207018

Client Sample ID: HA-4 (0-0.5)

Lab Sample ID: 820-668-16

Date Collected: 05/10/21 12:30
Matrix: Solid
Date Received: 05/11/21 14:51

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		05/12/21 13:07	05/12/21 17:32	1
Toluene	<0.00199	U	0.00199		mg/Kg		05/12/21 13:07	05/12/21 17:32	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		05/12/21 13:07	05/12/21 17:32	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		05/12/21 13:07	05/12/21 17:32	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		05/12/21 13:07	05/12/21 17:32	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		05/12/21 13:07	05/12/21 17:32	1
Total BTEX	<0.00398	U	0.00398		mg/Kg		05/12/21 13:07	05/12/21 17:32	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*124*		*70 - 130*	*05/12/21 13:07*	*05/12/21 17:32*	*1*
1,4-Difluorobenzene (Surr)	*100*		*70 - 130*	*05/12/21 13:07*	*05/12/21 17:32*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		05/12/21 13:24	05/13/21 03:30	1
Diesel Range Organics (Over C10-C28)	**124**		50.0		mg/Kg		05/12/21 13:24	05/13/21 03:30	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		05/12/21 13:24	05/13/21 03:30	1
Total TPH	**124**		50.0		mg/Kg		05/12/21 13:24	05/13/21 03:30	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*112*		*70 - 130*	*05/12/21 13:24*	*05/13/21 03:30*	*1*
o-Terphenyl	*111*		*70 - 130*	*05/12/21 13:24*	*05/13/21 03:30*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**1390**		25.0		mg/Kg			05/13/21 02:32	5

Client Sample ID: HA-4 (0.5-1)

Lab Sample ID: 820-668-17

Date Collected: 05/10/21 12:32
Matrix: Solid
Date Received: 05/11/21 14:51

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		05/12/21 13:07	05/12/21 17:52	1
Toluene	<0.00199	U	0.00199		mg/Kg		05/12/21 13:07	05/12/21 17:52	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		05/12/21 13:07	05/12/21 17:52	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		05/12/21 13:07	05/12/21 17:52	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		05/12/21 13:07	05/12/21 17:52	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		05/12/21 13:07	05/12/21 17:52	1
Total BTEX	<0.00398	U	0.00398		mg/Kg		05/12/21 13:07	05/12/21 17:52	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*118*		*70 - 130*	*05/12/21 13:07*	*05/12/21 17:52*	*1*
1,4-Difluorobenzene (Surr)	*98*		*70 - 130*	*05/12/21 13:07*	*05/12/21 17:52*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.8	U	49.8		mg/Kg		05/12/21 13:24	05/13/21 03:51	1

Client Sample Results

Client: Terracon Consulting Eng & Scientists
Project/Site: Aikman SWD--Terracon

Job ID: 820-668-1
SDG: AR207018

Client Sample ID: HA-4 (0.5-1)

Lab Sample ID: 820-668-17
Matrix: Solid
Date Collected: 05/10/21 12:32
Date Received: 05/11/21 14:51

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (Over C10-C28)	<49.8	U	49.8		mg/Kg		05/12/21 13:24	05/13/21 03:51	1
OII Range Organics (Over C28-C36)	<49.8	U	49.8		mg/Kg		05/12/21 13:24	05/13/21 03:51	1
Total TPH	<49.8	U	49.8		mg/Kg		05/12/21 13:24	05/13/21 03:51	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*111*		*70 - 130*	*05/12/21 13:24*	*05/13/21 03:51*	*1*
o-Terphenyl	*109*		*70 - 130*	*05/12/21 13:24*	*05/13/21 03:51*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**6740**		50.1		mg/Kg			05/13/21 02:38	10

Client Sample ID: HA-4 (1.5-2)

Lab Sample ID: 820-668-18
Matrix: Solid
Date Collected: 05/10/21 12:34
Date Received: 05/11/21 14:51

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		05/12/21 13:07	05/12/21 18:13	1
Toluene	<0.00200	U	0.00200		mg/Kg		05/12/21 13:07	05/12/21 18:13	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		05/12/21 13:07	05/12/21 18:13	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		05/12/21 13:07	05/12/21 18:13	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		05/12/21 13:07	05/12/21 18:13	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		05/12/21 13:07	05/12/21 18:13	1
Total BTEX	<0.00400	U	0.00400		mg/Kg		05/12/21 13:07	05/12/21 18:13	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*119*		*70 - 130*	*05/12/21 13:07*	*05/12/21 18:13*	*1*
1,4-Difluorobenzene (Surr)	*98*		*70 - 130*	*05/12/21 13:07*	*05/12/21 18:13*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		05/12/21 13:24	05/13/21 04:12	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		05/12/21 13:24	05/13/21 04:12	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		05/12/21 13:24	05/13/21 04:12	1
Total TPH	<50.0	U	50.0		mg/Kg		05/12/21 13:24	05/13/21 04:12	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*100*		*70 - 130*	*05/12/21 13:24*	*05/13/21 04:12*	*1*
o-Terphenyl	*101*		*70 - 130*	*05/12/21 13:24*	*05/13/21 04:12*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**8700**		50.1		mg/Kg			05/13/21 02:43	10

Client Sample Results

Client: Terracon Consulting Eng & Scientists
Project/Site: Aikman SWD--Terracon

Job ID: 820-668-1
SDG: AR207018

Client Sample ID: HA-4 (3.5-4)

Lab Sample ID: 820-668-19
Matrix: Solid
Date Collected: 05/10/21 12:36
Date Received: 05/11/21 14:51

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		05/12/21 13:07	05/12/21 18:33	1
Toluene	<0.00200	U	0.00200		mg/Kg		05/12/21 13:07	05/12/21 18:33	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		05/12/21 13:07	05/12/21 18:33	1
m-Xylene & p-Xylene	<0.00399	U	0.00399		mg/Kg		05/12/21 13:07	05/12/21 18:33	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		05/12/21 13:07	05/12/21 18:33	1
Xylenes, Total	<0.00399	U	0.00399		mg/Kg		05/12/21 13:07	05/12/21 18:33	1
Total BTEX	<0.00399	U	0.00399		mg/Kg		05/12/21 13:07	05/12/21 18:33	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*111*		*70 - 130*	*05/12/21 13:07*	*05/12/21 18:33*	*1*
1,4-Difluorobenzene (Surr)	*94*		*70 - 130*	*05/12/21 13:07*	*05/12/21 18:33*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9		mg/Kg		05/12/21 13:24	05/13/21 04:32	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		05/12/21 13:24	05/13/21 04:32	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		05/12/21 13:24	05/13/21 04:32	1
Total TPH	<49.9	U	49.9		mg/Kg		05/12/21 13:24	05/13/21 04:32	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*106*		*70 - 130*	*05/12/21 13:24*	*05/13/21 04:32*	*1*
o-Terphenyl	*106*		*70 - 130*	*05/12/21 13:24*	*05/13/21 04:32*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**3720**		25.2		mg/Kg			05/13/21 02:49	5

Client Sample ID: HA-4 (4.5-5)

Lab Sample ID: 820-668-20
Matrix: Solid
Date Collected: 05/10/21 12:38
Date Received: 05/11/21 14:51

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00198	U	0.00198		mg/Kg		05/12/21 13:07	05/12/21 18:54	1
Toluene	<0.00198	U	0.00198		mg/Kg		05/12/21 13:07	05/12/21 18:54	1
Ethylbenzene	<0.00198	U	0.00198		mg/Kg		05/12/21 13:07	05/12/21 18:54	1
m-Xylene & p-Xylene	<0.00396	U	0.00396		mg/Kg		05/12/21 13:07	05/12/21 18:54	1
o-Xylene	<0.00198	U	0.00198		mg/Kg		05/12/21 13:07	05/12/21 18:54	1
Xylenes, Total	<0.00396	U	0.00396		mg/Kg		05/12/21 13:07	05/12/21 18:54	1
Total BTEX	<0.00396	U	0.00396		mg/Kg		05/12/21 13:07	05/12/21 18:54	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*117*		*70 - 130*	*05/12/21 13:07*	*05/12/21 18:54*	*1*
1,4-Difluorobenzene (Surr)	*98*		*70 - 130*	*05/12/21 13:07*	*05/12/21 18:54*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9		mg/Kg		05/12/21 13:24	05/13/21 04:53	1

Client Sample Results

Client: Terracon Consulting Eng & Scientists
Project/Site: Aikman SWD--Terracon

Job ID: 820-668-1
SDG: AR207018

Client Sample ID: HA-4 (4.5-5)

Lab Sample ID: 820-668-20
Matrix: Solid
Date Collected: 05/10/21 12:38
Date Received: 05/11/21 14:51

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		05/12/21 13:24	05/13/21 04:53	1
OII Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		05/12/21 13:24	05/13/21 04:53	1
Total TPH	<49.9	U	49.9		mg/Kg		05/12/21 13:24	05/13/21 04:53	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*108*		*70 - 130*	*05/12/21 13:24*	*05/13/21 04:53*	*1*
o-Terphenyl	*107*		*70 - 130*	*05/12/21 13:24*	*05/13/21 04:53*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**2760**		25.1		mg/Kg			05/13/21 02:54	5

Client Sample ID: HA-5 (0-0.5)

Lab Sample ID: 820-668-21
Matrix: Solid
Date Collected: 05/10/21 12:40
Date Received: 05/11/21 14:51

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.202	U	0.202		mg/Kg		05/12/21 13:07	05/12/21 19:14	100
Toluene	**1.41**		0.202		mg/Kg		05/12/21 13:07	05/12/21 19:14	100
Ethylbenzene	**7.79**		0.202		mg/Kg		05/12/21 13:07	05/12/21 19:14	100
m-Xylene & p-Xylene	**11.9**		0.404		mg/Kg		05/12/21 13:07	05/12/21 19:14	100
o-Xylene	**7.09**		0.202		mg/Kg		05/12/21 13:07	05/12/21 19:14	100
Xylenes, Total	**19.0**		0.404		mg/Kg		05/12/21 13:07	05/12/21 19:14	100
Total BTEX	**28.2**		0.404		mg/Kg		05/12/21 13:07	05/12/21 19:14	100

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*163*	*S1+*	*70 - 130*	*05/12/21 13:07*	*05/12/21 19:14*	*100*
1,4-Difluorobenzene (Surr)	*101*		*70 - 130*	*05/12/21 13:07*	*05/12/21 19:14*	*100*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	**203**		49.9		mg/Kg		05/12/21 07:52	05/13/21 07:54	1
Diesel Range Organics (Over C10-C28)	**4750**		49.9		mg/Kg		05/12/21 07:52	05/13/21 07:54	1
OII Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		05/12/21 07:52	05/13/21 07:54	1
Total TPH	**4950**		49.9		mg/Kg		05/12/21 07:52	05/13/21 07:54	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*31*	*S1-*	*70 - 130*	*05/12/21 07:52*	*05/13/21 07:54*	*1*
o-Terphenyl	*57*	*S1-*	*70 - 130*	*05/12/21 07:52*	*05/13/21 07:54*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**1780**		24.9		mg/Kg			05/12/21 19:37	5

Client Sample Results

Client: Terracon Consulting Eng & Scientists
Project/Site: Aikman SWD--Terracon

Job ID: 820-668-1
SDG: AR207018

Client Sample ID: HA-6 (0-0.5)

Lab Sample ID: 820-668-22
Matrix: Solid
Date Collected: 05/10/21 12:42
Date Received: 05/11/21 14:51

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.0401	U	0.0401		mg/Kg		05/12/21 13:07	05/12/21 19:34	20
Toluene	**0.173**		0.0401		mg/Kg		05/12/21 13:07	05/12/21 19:34	20
Ethylbenzene	**0.124**		0.0401		mg/Kg		05/12/21 13:07	05/12/21 19:34	20
m-Xylene & p-Xylene	**0.125**		0.0802		mg/Kg		05/12/21 13:07	05/12/21 19:34	20
o-Xylene	**0.0933**		0.0401		mg/Kg		05/12/21 13:07	05/12/21 19:34	20
Xylenes, Total	**0.218**		0.0802		mg/Kg		05/12/21 13:07	05/12/21 19:34	20
Total BTEX	**0.515**		0.0802		mg/Kg		05/12/21 13:07	05/12/21 19:34	20

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*122*		*70 - 130*	*05/12/21 13:07*	*05/12/21 19:34*	*20*
1,4-Difluorobenzene (Surr)	*110*		*70 - 130*	*05/12/21 13:07*	*05/12/21 19:34*	*20*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	**52.7**		49.8		mg/Kg		05/12/21 07:52	05/12/21 17:56	1
Diesel Range Organics (Over C10-C28)	**4990**		49.8		mg/Kg		05/12/21 07:52	05/12/21 17:56	1
Oil Range Organics (Over C28-C36)	<49.8	U	49.8		mg/Kg		05/12/21 07:52	05/12/21 17:56	1
Total TPH	**5040**		49.8		mg/Kg		05/12/21 07:52	05/12/21 17:56	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*109*		*70 - 130*	*05/12/21 07:52*	*05/12/21 17:56*	*1*
o-Terphenyl	*101*		*70 - 130*	*05/12/21 07:52*	*05/12/21 17:56*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**4420**		50.4		mg/Kg			05/12/21 19:52	10

Client Sample ID: HA-7 (0-0.5)

Lab Sample ID: 820-668-23
Matrix: Solid
Date Collected: 05/10/21 12:44
Date Received: 05/11/21 14:51

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		05/12/21 13:07	05/12/21 23:39	1
Toluene	<0.00199	U	0.00199		mg/Kg		05/12/21 13:07	05/12/21 23:39	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		05/12/21 13:07	05/12/21 23:39	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		05/12/21 13:07	05/12/21 23:39	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		05/12/21 13:07	05/12/21 23:39	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		05/12/21 13:07	05/12/21 23:39	1
Total BTEX	<0.00398	U	0.00398		mg/Kg		05/12/21 13:07	05/12/21 23:39	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*132*	*S1+*	*70 - 130*	*05/12/21 13:07*	*05/12/21 23:39*	*1*
1,4-Difluorobenzene (Surr)	*0.08*	*S1-*	*70 - 130*	*05/12/21 13:07*	*05/12/21 23:39*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		05/12/21 07:52	05/12/21 18:23	1

Eurofins Xenco, Lubbock

Client Sample Results

Client: Terracon Consulting Eng & Scientists
Project/Site: Aikman SWD--Terracon

Job ID: 820-668-1
SDG: AR207018

Client Sample ID: HA-7 (0-0.5)

Lab Sample ID: 820-668-23
Matrix: Solid
Date Collected: 05/10/21 12:44
Date Received: 05/11/21 14:51

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (Over C10-C28)	**90.5**		50.0		mg/Kg		05/12/21 07:52	05/12/21 18:23	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		05/12/21 07:52	05/12/21 18:23	1
Total TPH	**90.5**		50.0		mg/Kg		05/12/21 07:52	05/12/21 18:23	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*103*		*70 - 130*	*05/12/21 07:52*	*05/12/21 18:23*	*1*
o-Terphenyl	*104*		*70 - 130*	*05/12/21 07:52*	*05/12/21 18:23*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**575**		5.05		mg/Kg			05/12/21 19:58	1

Client Sample ID: HA-8 (0-0.5)

Lab Sample ID: 820-668-24
Matrix: Solid
Date Collected: 05/10/21 12:46
Date Received: 05/11/21 14:51

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.0396	U	0.0396		mg/Kg		05/12/21 13:07	05/13/21 00:00	20
Toluene	<0.0396	U	0.0396		mg/Kg		05/12/21 13:07	05/13/21 00:00	20
Ethylbenzene	<0.0396	U	0.0396		mg/Kg		05/12/21 13:07	05/13/21 00:00	20
m-Xylene & p-Xylene	<0.0792	U	0.0792		mg/Kg		05/12/21 13:07	05/13/21 00:00	20
o-Xylene	<0.0396	U	0.0396		mg/Kg		05/12/21 13:07	05/13/21 00:00	20
Xylenes, Total	<0.0792	U	0.0792		mg/Kg		05/12/21 13:07	05/13/21 00:00	20
Total BTEX	<0.0792	U	0.0792		mg/Kg		05/12/21 13:07	05/13/21 00:00	20

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*128*		*70 - 130*	*05/12/21 13:07*	*05/13/21 00:00*	*20*
1,4-Difluorobenzene (Surr)	*106*		*70 - 130*	*05/12/21 13:07*	*05/13/21 00:00*	*20*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9		mg/Kg		05/12/21 07:52	05/12/21 18:43	1
Diesel Range Organics (Over C10-C28)	**167**		49.9		mg/Kg		05/12/21 07:52	05/12/21 18:43	1
OII Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		05/12/21 07:52	05/12/21 18:43	1
Total TPH	**167**		49.9		mg/Kg		05/12/21 07:52	05/12/21 18:43	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*112*		*70 - 130*	*05/12/21 07:52*	*05/12/21 18:43*	*1*
o-Terphenyl	*108*		*70 - 130*	*05/12/21 07:52*	*05/12/21 18:43*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**11200**		99.6		mg/Kg			05/12/21 20:03	20

Surrogate Summary

Client: Terracon Consulting Eng & Scientists
Project/Site: Aikman SWD--Terracon

Job ID: 820-668-1
SDG: AR207018

Method: 8021B - Volatile Organic Compounds (GC)

Matrix: Solid **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)	
Lab Sample ID	Client Sample ID	BFB1 (70-130)	DFBZ1 (70-130)
820-668-1	HA-1 (0-0.5)	107	2 S1-
820-668-2	HA-1 (0.5-1)	102	103
820-668-3	HA-1 (1.5-2)	140 S1+	115
820-668-4	HA-1 (3.5-4)	191 S1+	0.3 S1-
820-668-5	HA-1 (4.5-5)	378 S1+	117
820-668-6	HA-2 (0-0.5)	97	112
820-668-7	HA-2 (0.5-1)	96	110
820-668-8	HA-2 (1.5-2)	110	131 S1+
820-668-9	HA-2 (3.5-4)	99	114
820-668-10	HA-2 (4.5-5)	111	124
820-668-11	HA-3 (0-0.5)	100	117
820-668-12	HA-3 (0.5-1)	104	114
820-668-13	HA-3 (1.5-2)	107	114
820-668-14	HA-3 (3.5-4)	117	1 S1-
820-668-15	HA-3 (4.5-5)	121	98
820-668-16	HA-4 (0-0.5)	124	100
820-668-17	HA-4 (0.5-1)	118	98
820-668-18	HA-4 (1.5-2)	119	98
820-668-19	HA-4 (3.5-4)	111	94
820-668-20	HA-4 (4.5-5)	117	98
820-668-21	HA-5 (0-0.5)	163 S1+	101
820-668-22	HA-6 (0-0.5)	122	110
820-668-23	HA-7 (0-0.5)	132 S1+	0.08 S1-
820-668-24	HA-8 (0-0.5)	128	106
LCS 880-3013/1-A	Lab Control Sample	93	115
LCS 880-3028/1-A	Lab Control Sample	106	107
LCSD 880-3013/2-A	Lab Control Sample Dup	92	109
LCSD 880-3028/2-A	Lab Control Sample Dup	107	105
MB 880-3013/5-A	Method Blank	101	85
MB 880-3028/5-A	Method Blank	91	94

Surrogate Legend

BFB = 4-Bromofluorobenzene (Surr)
DFBZ = 1,4-Difluorobenzene (Surr)

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

Matrix: Solid **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)	
Lab Sample ID	Client Sample ID	1CO1 (70-130)	OTPH1 (70-130)
820-668-1	HA-1 (0-0.5)	104	105
820-668-2	HA-1 (0.5-1)	111	107
820-668-3	HA-1 (1.5-2)	107	99
820-668-4	HA-1 (3.5-4)	106	98
820-668-5	HA-1 (4.5-5)	113	97
820-668-6	HA-2 (0-0.5)	95	96
820-668-7	HA-2 (0.5-1)	105	105
820-668-8	HA-2 (1.5-2)	116	121
820-668-8 MS	HA-2 (1.5-2)	99	91

Surrogate Summary

Client: Terracon Consulting Eng & Scientists
Project/Site: Aikman SWD--Terracon

Job ID: 820-668-1
SDG: AR207018

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

Matrix: Solid **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)									
Lab Sample ID	Client Sample ID	1CO1 (70-130)	OTPH1 (70-130)								
820-668-8 MSD	HA-2 (1.5-2)	97	88								
820-668-9	HA-2 (3.5-4)	106	107								
820-668-10	HA-2 (4.5-5)	105	105								
820-668-11	HA-3 (0-0.5)	106	106								
820-668-12	HA-3 (0.5-1)	103	105								
820-668-13	HA-3 (1.5-2)	101	103								
820-668-14	HA-3 (3.5-4)	101	100								
820-668-15	HA-3 (4.5-5)	103	105								
820-668-16	HA-4 (0-0.5)	112	111								
820-668-17	HA-4 (0.5-1)	111	109								
820-668-18	HA-4 (1.5-2)	100	101								
820-668-19	HA-4 (3.5-4)	106	106								
820-668-20	HA-4 (4.5-5)	108	107								
820-668-21	HA-5 (0-0.5)	31 S1-	57 S1-								
820-668-22	HA-6 (0-0.5)	109	101								
820-668-23	HA-7 (0-0.5)	103	104								
820-668-24	HA-8 (0-0.5)	112	108								
LCS 880-3008/2-A	Lab Control Sample	111	110								
LCS 880-3030/2-A	Lab Control Sample	118	112								
LCSD 880-3008/3-A	Lab Control Sample Dup	115	110								
LCSD 880-3030/3-A	Lab Control Sample Dup	120	114								
MB 880-3008/1-A	Method Blank	106	111								
MB 880-3030/1-A	Method Blank	111	113								

Surrogate Legend

1CO = 1-Chlorooctane

OTPH = o-Terphenyl

QC Sample Results

Client: Terracon Consulting Eng & Scientists
Project/Site: Aikman SWD--Terracon

Job ID: 820-668-1
SDG: AR207018

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-3013/5-A
Matrix: Solid
Analysis Batch: 3016

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 3013

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		05/12/21 09:29	05/12/21 14:05	1
Toluene	<0.00200	U	0.00200		mg/Kg		05/12/21 09:29	05/12/21 14:05	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		05/12/21 09:29	05/12/21 14:05	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		05/12/21 09:29	05/12/21 14:05	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		05/12/21 09:29	05/12/21 14:05	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		05/12/21 09:29	05/12/21 14:05	1
Total BTEX	<0.00400	U	0.00400		mg/Kg		05/12/21 09:29	05/12/21 14:05	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*101*		*70 - 130*	*05/12/21 09:29*	*05/12/21 14:05*	*1*
1,4-Difluorobenzene (Surr)	*85*		*70 - 130*	*05/12/21 09:29*	*05/12/21 14:05*	*1*

Lab Sample ID: LCS 880-3013/1-A
Matrix: Solid
Analysis Batch: 3016

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 3013

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Benzene			0.100	0.07611		mg/Kg		76	70 - 130		
Toluene			0.100	0.08793		mg/Kg		88	70 - 130		
Ethylbenzene			0.100	0.08858		mg/Kg		89	70 - 130		
m-Xylene & p-Xylene			0.200	0.1795		mg/Kg		90	70 - 130		
o-Xylene			0.100	0.08700		mg/Kg		87	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*93*		*70 - 130*
1,4-Difluorobenzene (Surr)	*115*		*70 - 130*

Lab Sample ID: LCSD 880-3013/2-A
Matrix: Solid
Analysis Batch: 3016

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 3013

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene			0.100	0.08651		mg/Kg		87	70 - 130	13	35
Toluene			0.100	0.09615		mg/Kg		96	70 - 130	9	35
Ethylbenzene			0.100	0.09322		mg/Kg		93	70 - 130	5	35
m-Xylene & p-Xylene			0.200	0.1881		mg/Kg		94	70 - 130	5	35
o-Xylene			0.100	0.09218		mg/Kg		92	70 - 130	6	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*92*		*70 - 130*
1,4-Difluorobenzene (Surr)	*109*		*70 - 130*

Lab Sample ID: MB 880-3028/5-A
Matrix: Solid
Analysis Batch: 3029

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 3028

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		05/12/21 13:07	05/12/21 16:30	1

QC Sample Results

Client: Terracon Consulting Eng & Scientists
Project/Site: Aikman SWD--Terracon

Job ID: 820-668-1
SDG: AR207018

Method: 8021B - Volatile Organic Compounds (GC) (Continued)

Lab Sample ID: MB 880-3028/5-A
Matrix: Solid
Analysis Batch: 3029

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 3028

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Toluene	<0.00200	U	0.00200		mg/Kg		05/12/21 13:07	05/12/21 16:30	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		05/12/21 13:07	05/12/21 16:30	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		05/12/21 13:07	05/12/21 16:30	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		05/12/21 13:07	05/12/21 16:30	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		05/12/21 13:07	05/12/21 16:30	1
Total BTEX	<0.00400	U	0.00400		mg/Kg		05/12/21 13:07	05/12/21 16:30	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*91*		*70 - 130*	*05/12/21 13:07*	*05/12/21 16:30*	*1*
1,4-Difluorobenzene (Surr)	*94*		*70 - 130*	*05/12/21 13:07*	*05/12/21 16:30*	*1*

Lab Sample ID: LCS 880-3028/1-A
Matrix: Solid
Analysis Batch: 3029

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 3028

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Benzene			0.100	0.09171		mg/Kg		92	70 - 130		
Toluene			0.100	0.08739		mg/Kg		87	70 - 130		
Ethylbenzene			0.100	0.09124		mg/Kg		91	70 - 130		
m-Xylene & p-Xylene			0.200	0.1943		mg/Kg		97	70 - 130		
o-Xylene			0.100	0.1021		mg/Kg		102	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*106*		*70 - 130*
1,4-Difluorobenzene (Surr)	*107*		*70 - 130*

Lab Sample ID: LCSD 880-3028/2-A
Matrix: Solid
Analysis Batch: 3029

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 3028

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene			0.100	0.1011		mg/Kg		101	70 - 130	10	35
Toluene			0.100	0.09671		mg/Kg		97	70 - 130	10	35
Ethylbenzene			0.100	0.1028		mg/Kg		103	70 - 130	12	35
m-Xylene & p-Xylene			0.200	0.2190		mg/Kg		109	70 - 130	12	35
o-Xylene			0.100	0.1134		mg/Kg		113	70 - 130	11	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*107*		*70 - 130*
1,4-Difluorobenzene (Surr)	*105*		*70 - 130*

QC Sample Results

Client: Terracon Consulting Eng & Scientists
Project/Site: Aikman SWD--Terracon

Job ID: 820-668-1
SDG: AR207018

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

Lab Sample ID: MB 880-3008/1-A
Matrix: Solid
Analysis Batch: 3004

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 3008

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		05/12/21 07:52	05/12/21 10:29	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		05/12/21 07:52	05/12/21 10:29	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		05/12/21 07:52	05/12/21 10:29	1
Total TPH	<50.0	U	50.0		mg/Kg		05/12/21 07:52	05/12/21 10:29	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*106*		*70 - 130*	*05/12/21 07:52*	*05/12/21 10:29*	*1*
o-Terphenyl	*111*		*70 - 130*	*05/12/21 07:52*	*05/12/21 10:29*	*1*

Lab Sample ID: LCS 880-3008/2-A
Matrix: Solid
Analysis Batch: 3004

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 3008

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Gasoline Range Organics (GRO)-C6-C10			1000	963.8		mg/Kg		96	70 - 130		
Diesel Range Organics (Over C10-C28)			1000	1152		mg/Kg		115	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1-Chlorooctane	*111*		*70 - 130*
o-Terphenyl	*110*		*70 - 130*

Lab Sample ID: LCSD 880-3008/3-A
Matrix: Solid
Analysis Batch: 3004

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 3008

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			1000	996.0		mg/Kg		100	70 - 130	3	20
Diesel Range Organics (Over C10-C28)			1000	1142		mg/Kg		114	70 - 130	1	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1-Chlorooctane	*115*		*70 - 130*
o-Terphenyl	*110*		*70 - 130*

Lab Sample ID: MB 880-3030/1-A
Matrix: Solid
Analysis Batch: 3004

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 3030

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		05/12/21 13:24	05/12/21 19:45	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		05/12/21 13:24	05/12/21 19:45	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		05/12/21 13:24	05/12/21 19:45	1
Total TPH	<50.0	U	50.0		mg/Kg		05/12/21 13:24	05/12/21 19:45	1

QC Sample Results

Client: Terracon Consulting Eng & Scientists
Project/Site: Aikman SWD--Terracon

Job ID: 820-668-1
SDG: AR207018

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

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	111		70 - 130	05/12/21 13:24	05/12/21 19:45	1
o-Terphenyl	113		70 - 130	05/12/21 13:24	05/12/21 19:45	1

Lab Sample ID: LCS 880-3030/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 3004 — **Prep Batch: 3030**

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Gasoline Range Organics (GRO)-C6-C10			1000	1002		mg/Kg		100	70 - 130		
Diesel Range Organics (Over C10-C28)			1000	1179		mg/Kg		118	70 - 130		

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1-Chlorooctane	118		70 - 130
o-Terphenyl	112		70 - 130

Lab Sample ID: LCSD 880-3030/3-A — **Client Sample ID: Lab Control Sample Dup**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 3004 — **Prep Batch: 3030**

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			1000	964.8		mg/Kg		96	70 - 130	4	20
Diesel Range Organics (Over C10-C28)			1000	1195		mg/Kg		120	70 - 130	1	20

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
1-Chlorooctane	120		70 - 130
o-Terphenyl	114		70 - 130

Lab Sample ID: 820-668-8 MS — **Client Sample ID: HA-2 (1.5-2)**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 3004 — **Prep Batch: 3030**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Gasoline Range Organics (GRO)-C6-C10	606	F1	996	925.5	F1	mg/Kg		32	70 - 130		
Diesel Range Organics (Over C10-C28)	<49.7	U	996	1064		mg/Kg		103	70 - 130		

Surrogate	MS %Recovery	MS Qualifier	Limits
1-Chlorooctane	99		70 - 130
o-Terphenyl	91		70 - 130

Lab Sample ID: 820-668-8 MSD — **Client Sample ID: HA-2 (1.5-2)**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 3004 — **Prep Batch: 3030**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	606	F1	998	900.2	F1	mg/Kg		29	70 - 130	3	20

QC Sample Results

Client: Terracon Consulting Eng & Scientists
Project/Site: Aikman SWD--Terracon

Job ID: 820-668-1
SDG: AR207018

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

Lab Sample ID: 820-668-8 MSD
Matrix: Solid
Analysis Batch: 3004

Client Sample ID: HA-2 (1.5-2)
Prep Type: Total/NA
Prep Batch: 3030

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Diesel Range Organics (Over C10-C28)	<49.7	U	998	1047		mg/Kg		101	70 - 130	2	20

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
1-Chlorooctane	*97*		*70 - 130*
o-Terphenyl	*88*		*70 - 130*

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-3017/1-A
Matrix: Solid
Analysis Batch: 3032

Client Sample ID: Method Blank
Prep Type: Soluble

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00	U	5.00		mg/Kg			05/13/21 00:13	1

Lab Sample ID: LCS 880-3017/2-A
Matrix: Solid
Analysis Batch: 3032

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	250	233.4		mg/Kg		93	90 - 110

Lab Sample ID: LCSD 880-3017/3-A
Matrix: Solid
Analysis Batch: 3032

Client Sample ID: Lab Control Sample Dup
Prep Type: Soluble

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	250	237.3		mg/Kg		95	90 - 110	2	20

Lab Sample ID: 820-668-1 MS
Matrix: Solid
Analysis Batch: 3032

Client Sample ID: HA-1 (0-0.5)
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	315	F1	250	1584	F1	mg/Kg		508	90 - 110

Lab Sample ID: 820-668-1 MSD
Matrix: Solid
Analysis Batch: 3032

Client Sample ID: HA-1 (0-0.5)
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	315	F1	250	1578	F1	mg/Kg		505	90 - 110	0	20

Lab Sample ID: 820-668-11 MS
Matrix: Solid
Analysis Batch: 3032

Client Sample ID: HA-3 (0-0.5)
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	358	F1	250	1642	F1	mg/Kg		514	90 - 110

QC Sample Results

Client: Terracon Consulting Eng & Scientists
Project/Site: Aikman SWD--Terracon

Job ID: 820-668-1
SDG: AR207018

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: 820-668-11 MSD — **Client Sample ID: HA-3 (0-0.5)**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 3032

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	358	F1	250	1553	F1	mg/Kg		478	90 - 110	6	20

Lab Sample ID: MB 880-3018/1-A — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 3048

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00	U	5.00		mg/Kg			05/12/21 19:21	1

Lab Sample ID: LCS 880-3018/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 3048

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	250	247.5		mg/Kg		99	90 - 110

Lab Sample ID: LCSD 880-3018/3-A — **Client Sample ID: Lab Control Sample Dup**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 3048

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	250	244.0		mg/Kg		98	90 - 110	1	20

Lab Sample ID: 820-668-21 MS — **Client Sample ID: HA-5 (0-0.5)**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 3048

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	1780		1250	3006		mg/Kg		98	90 - 110

Lab Sample ID: 820-668-21 MSD — **Client Sample ID: HA-5 (0-0.5)**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 3048

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	1780		1250	2992		mg/Kg		97	90 - 110	0	20

QC Association Summary

Client: Terracon Consulting Eng & Scientists
Project/Site: Aikman SWD--Terracon

Job ID: 820-668-1
SDG: AR207018

GC VOA

Prep Batch: 3013

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
820-668-1	HA-1 (0-0.5)	Total/NA	Solid	5035	
820-668-2	HA-1 (0.5-1)	Total/NA	Solid	5035	
820-668-3	HA-1 (1.5-2)	Total/NA	Solid	5035	
820-668-4	HA-1 (3.5-4)	Total/NA	Solid	5035	
820-668-5	HA-1 (4.5-5)	Total/NA	Solid	5035	
820-668-6	HA-2 (0-0.5)	Total/NA	Solid	5035	
820-668-7	HA-2 (0.5-1)	Total/NA	Solid	5035	
820-668-8	HA-2 (1.5-2)	Total/NA	Solid	5035	
820-668-9	HA-2 (3.5-4)	Total/NA	Solid	5035	
820-668-10	HA-2 (4.5-5)	Total/NA	Solid	5035	
820-668-11	HA-3 (0-0.5)	Total/NA	Solid	5035	
820-668-12	HA-3 (0.5-1)	Total/NA	Solid	5035	
820-668-13	HA-3 (1.5-2)	Total/NA	Solid	5035	
820-668-14	HA-3 (3.5-4)	Total/NA	Solid	5035	
MB 880-3013/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-3013/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-3013/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	

Analysis Batch: 3016

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
820-668-1	HA-1 (0-0.5)	Total/NA	Solid	8021B	3013
820-668-2	HA-1 (0.5-1)	Total/NA	Solid	8021B	3013
820-668-3	HA-1 (1.5-2)	Total/NA	Solid	8021B	3013
820-668-4	HA-1 (3.5-4)	Total/NA	Solid	8021B	3013
820-668-5	HA-1 (4.5-5)	Total/NA	Solid	8021B	3013
820-668-6	HA-2 (0-0.5)	Total/NA	Solid	8021B	3013
820-668-7	HA-2 (0.5-1)	Total/NA	Solid	8021B	3013
820-668-8	HA-2 (1.5-2)	Total/NA	Solid	8021B	3013
820-668-9	HA-2 (3.5-4)	Total/NA	Solid	8021B	3013
820-668-10	HA-2 (4.5-5)	Total/NA	Solid	8021B	3013
820-668-11	HA-3 (0-0.5)	Total/NA	Solid	8021B	3013
820-668-12	HA-3 (0.5-1)	Total/NA	Solid	8021B	3013
820-668-13	HA-3 (1.5-2)	Total/NA	Solid	8021B	3013
820-668-14	HA-3 (3.5-4)	Total/NA	Solid	8021B	3013
MB 880-3013/5-A	Method Blank	Total/NA	Solid	8021B	3013
LCS 880-3013/1-A	Lab Control Sample	Total/NA	Solid	8021B	3013
LCSD 880-3013/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	3013

Prep Batch: 3028

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
820-668-15	HA-3 (4.5-5)	Total/NA	Solid	5035	
820-668-16	HA-4 (0-0.5)	Total/NA	Solid	5035	
820-668-17	HA-4 (0.5-1)	Total/NA	Solid	5035	
820-668-18	HA-4 (1.5-2)	Total/NA	Solid	5035	
820-668-19	HA-4 (3.5-4)	Total/NA	Solid	5035	
820-668-20	HA-4 (4.5-5)	Total/NA	Solid	5035	
820-668-21	HA-5 (0-0.5)	Total/NA	Solid	5035	
820-668-22	HA-6 (0-0.5)	Total/NA	Solid	5035	
820-668-23	HA-7 (0-0.5)	Total/NA	Solid	5035	
820-668-24	HA-8 (0-0.5)	Total/NA	Solid	5035	
MB 880-3028/5-A	Method Blank	Total/NA	Solid	5035	

QC Association Summary

Client: Terracon Consulting Eng & Scientists
Project/Site: Aikman SWD--Terracon

Job ID: 820-668-1
SDG: AR207018

GC VOA (Continued)

Prep Batch: 3028 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 880-3028/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-3028/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	

Analysis Batch: 3029

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
820-668-5	HA-1 (4.5-5)	Total/NA	Solid	8021B	3013
820-668-15	HA-3 (4.5-5)	Total/NA	Solid	8021B	3028
820-668-16	HA-4 (0-0.5)	Total/NA	Solid	8021B	3028
820-668-17	HA-4 (0.5-1)	Total/NA	Solid	8021B	3028
820-668-18	HA-4 (1.5-2)	Total/NA	Solid	8021B	3028
820-668-19	HA-4 (3.5-4)	Total/NA	Solid	8021B	3028
820-668-20	HA-4 (4.5-5)	Total/NA	Solid	8021B	3028
820-668-21	HA-5 (0-0.5)	Total/NA	Solid	8021B	3028
820-668-22	HA-6 (0-0.5)	Total/NA	Solid	8021B	3028
820-668-23	HA-7 (0-0.5)	Total/NA	Solid	8021B	3028
820-668-24	HA-8 (0-0.5)	Total/NA	Solid	8021B	3028
MB 880-3028/5-A	Method Blank	Total/NA	Solid	8021B	3028
LCS 880-3028/1-A	Lab Control Sample	Total/NA	Solid	8021B	3028
LCSD 880-3028/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	3028

GC Semi VOA

Analysis Batch: 3004

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
820-668-1	HA-1 (0-0.5)	Total/NA	Solid	8015B NM	3030
820-668-2	HA-1 (0.5-1)	Total/NA	Solid	8015B NM	3030
820-668-3	HA-1 (1.5-2)	Total/NA	Solid	8015B NM	3030
820-668-4	HA-1 (3.5-4)	Total/NA	Solid	8015B NM	3030
820-668-5	HA-1 (4.5-5)	Total/NA	Solid	8015B NM	3030
820-668-6	HA-2 (0-0.5)	Total/NA	Solid	8015B NM	3030
820-668-7	HA-2 (0.5-1)	Total/NA	Solid	8015B NM	3030
820-668-8	HA-2 (1.5-2)	Total/NA	Solid	8015B NM	3030
820-668-9	HA-2 (3.5-4)	Total/NA	Solid	8015B NM	3030
820-668-10	HA-2 (4.5-5)	Total/NA	Solid	8015B NM	3030
820-668-11	HA-3 (0-0.5)	Total/NA	Solid	8015B NM	3030
820-668-12	HA-3 (0.5-1)	Total/NA	Solid	8015B NM	3030
820-668-13	HA-3 (1.5-2)	Total/NA	Solid	8015B NM	3030
820-668-14	HA-3 (3.5-4)	Total/NA	Solid	8015B NM	3030
820-668-15	HA-3 (4.5-5)	Total/NA	Solid	8015B NM	3030
820-668-16	HA-4 (0-0.5)	Total/NA	Solid	8015B NM	3030
820-668-17	HA-4 (0.5-1)	Total/NA	Solid	8015B NM	3030
820-668-18	HA-4 (1.5-2)	Total/NA	Solid	8015B NM	3030
820-668-19	HA-4 (3.5-4)	Total/NA	Solid	8015B NM	3030
820-668-20	HA-4 (4.5-5)	Total/NA	Solid	8015B NM	3030
820-668-21	HA-5 (0-0.5)	Total/NA	Solid	8015B NM	3008
820-668-22	HA-6 (0-0.5)	Total/NA	Solid	8015B NM	3008
820-668-23	HA-7 (0-0.5)	Total/NA	Solid	8015B NM	3008
820-668-24	HA-8 (0-0.5)	Total/NA	Solid	8015B NM	3008
MB 880-3008/1-A	Method Blank	Total/NA	Solid	8015B NM	3008
MB 880-3030/1-A	Method Blank	Total/NA	Solid	8015B NM	3030
LCS 880-3008/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	3008

QC Association Summary

Client: Terracon Consulting Eng & Scientists
Project/Site: Aikman SWD--Terracon

Job ID: 820-668-1
SDG: AR207018

GC Semi VOA (Continued)

Analysis Batch: 3004 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 880-3030/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	3030
LCSD 880-3008/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	3008
LCSD 880-3030/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	3030
820-668-8 MS	HA-2 (1.5-2)	Total/NA	Solid	8015B NM	3030
820-668-8 MSD	HA-2 (1.5-2)	Total/NA	Solid	8015B NM	3030

Prep Batch: 3008

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
820-668-21	HA-5 (0-0.5)	Total/NA	Solid	8015NM Prep	
820-668-22	HA-6 (0-0.5)	Total/NA	Solid	8015NM Prep	
820-668-23	HA-7 (0-0.5)	Total/NA	Solid	8015NM Prep	
820-668-24	HA-8 (0-0.5)	Total/NA	Solid	8015NM Prep	
MB 880-3008/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-3008/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-3008/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	

Prep Batch: 3030

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
820-668-1	HA-1 (0-0.5)	Total/NA	Solid	8015NM Prep	
820-668-2	HA-1 (0.5-1)	Total/NA	Solid	8015NM Prep	
820-668-3	HA-1 (1.5-2)	Total/NA	Solid	8015NM Prep	
820-668-4	HA-1 (3.5-4)	Total/NA	Solid	8015NM Prep	
820-668-5	HA-1 (4.5-5)	Total/NA	Solid	8015NM Prep	
820-668-6	HA-2 (0-0.5)	Total/NA	Solid	8015NM Prep	
820-668-7	HA-2 (0.5-1)	Total/NA	Solid	8015NM Prep	
820-668-8	HA-2 (1.5-2)	Total/NA	Solid	8015NM Prep	
820-668-9	HA-2 (3.5-4)	Total/NA	Solid	8015NM Prep	
820-668-10	HA-2 (4.5-5)	Total/NA	Solid	8015NM Prep	
820-668-11	HA-3 (0-0.5)	Total/NA	Solid	8015NM Prep	
820-668-12	HA-3 (0.5-1)	Total/NA	Solid	8015NM Prep	
820-668-13	HA-3 (1.5-2)	Total/NA	Solid	8015NM Prep	
820-668-14	HA-3 (3.5-4)	Total/NA	Solid	8015NM Prep	
820-668-15	HA-3 (4.5-5)	Total/NA	Solid	8015NM Prep	
820-668-16	HA-4 (0-0.5)	Total/NA	Solid	8015NM Prep	
820-668-17	HA-4 (0.5-1)	Total/NA	Solid	8015NM Prep	
820-668-18	HA-4 (1.5-2)	Total/NA	Solid	8015NM Prep	
820-668-19	HA-4 (3.5-4)	Total/NA	Solid	8015NM Prep	
820-668-20	HA-4 (4.5-5)	Total/NA	Solid	8015NM Prep	
MB 880-3030/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-3030/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-3030/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
820-668-8 MS	HA-2 (1.5-2)	Total/NA	Solid	8015NM Prep	
820-668-8 MSD	HA-2 (1.5-2)	Total/NA	Solid	8015NM Prep	

HPLC/IC

Leach Batch: 3017

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
820-668-1	HA-1 (0-0.5)	Soluble	Solid	DI Leach	
820-668-2	HA-1 (0.5-1)	Soluble	Solid	DI Leach	
820-668-3	HA-1 (1.5-2)	Soluble	Solid	DI Leach	

QC Association Summary

Client: Terracon Consulting Eng & Scientists
Project/Site: Aikman SWD--Terracon

Job ID: 820-668-1
SDG: AR207018

HPLC/IC (Continued)

Leach Batch: 3017 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
820-668-4	HA-1 (3.5-4)	Soluble	Solid	DI Leach	
820-668-5	HA-1 (4.5-5)	Soluble	Solid	DI Leach	
820-668-6	HA-2 (0-0.5)	Soluble	Solid	DI Leach	
820-668-7	HA-2 (0.5-1)	Soluble	Solid	DI Leach	
820-668-8	HA-2 (1.5-2)	Soluble	Solid	DI Leach	
820-668-9	HA-2 (3.5-4)	Soluble	Solid	DI Leach	
820-668-10	HA-2 (4.5-5)	Soluble	Solid	DI Leach	
820-668-11	HA-3 (0-0.5)	Soluble	Solid	DI Leach	
820-668-12	HA-3 (0.5-1)	Soluble	Solid	DI Leach	
820-668-13	HA-3 (1.5-2)	Soluble	Solid	DI Leach	
820-668-14	HA-3 (3.5-4)	Soluble	Solid	DI Leach	
820-668-15	HA-3 (4.5-5)	Soluble	Solid	DI Leach	
820-668-16	HA-4 (0-0.5)	Soluble	Solid	DI Leach	
820-668-17	HA-4 (0.5-1)	Soluble	Solid	DI Leach	
820-668-18	HA-4 (1.5-2)	Soluble	Solid	DI Leach	
820-668-19	HA-4 (3.5-4)	Soluble	Solid	DI Leach	
820-668-20	HA-4 (4.5-5)	Soluble	Solid	DI Leach	
MB 880-3017/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-3017/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-3017/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
820-668-1 MS	HA-1 (0-0.5)	Soluble	Solid	DI Leach	
820-668-1 MSD	HA-1 (0-0.5)	Soluble	Solid	DI Leach	
820-668-11 MS	HA-3 (0-0.5)	Soluble	Solid	DI Leach	
820-668-11 MSD	HA-3 (0-0.5)	Soluble	Solid	DI Leach	

Leach Batch: 3018

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
820-668-21	HA-5 (0-0.5)	Soluble	Solid	DI Leach	
820-668-22	HA-6 (0-0.5)	Soluble	Solid	DI Leach	
820-668-23	HA-7 (0-0.5)	Soluble	Solid	DI Leach	
820-668-24	HA-8 (0-0.5)	Soluble	Solid	DI Leach	
MB 880-3018/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-3018/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-3018/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
820-668-21 MS	HA-5 (0-0.5)	Soluble	Solid	DI Leach	
820-668-21 MSD	HA-5 (0-0.5)	Soluble	Solid	DI Leach	

Analysis Batch: 3032

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
820-668-1	HA-1 (0-0.5)	Soluble	Solid	300.0	3017
820-668-2	HA-1 (0.5-1)	Soluble	Solid	300.0	3017
820-668-3	HA-1 (1.5-2)	Soluble	Solid	300.0	3017
820-668-4	HA-1 (3.5-4)	Soluble	Solid	300.0	3017
820-668-5	HA-1 (4.5-5)	Soluble	Solid	300.0	3017
820-668-6	HA-2 (0-0.5)	Soluble	Solid	300.0	3017
820-668-7	HA-2 (0.5-1)	Soluble	Solid	300.0	3017
820-668-8	HA-2 (1.5-2)	Soluble	Solid	300.0	3017
820-668-9	HA-2 (3.5-4)	Soluble	Solid	300.0	3017
820-668-10	HA-2 (4.5-5)	Soluble	Solid	300.0	3017
820-668-11	HA-3 (0-0.5)	Soluble	Solid	300.0	3017
820-668-12	HA-3 (0.5-1)	Soluble	Solid	300.0	3017

QC Association Summary

Client: Terracon Consulting Eng & Scientists
Project/Site: Aikman SWD--Terracon

Job ID: 820-668-1
SDG: AR207018

HPLC/IC (Continued)

Analysis Batch: 3032 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
820-668-13	HA-3 (1.5-2)	Soluble	Solid	300.0	3017
820-668-14	HA-3 (3.5-4)	Soluble	Solid	300.0	3017
820-668-15	HA-3 (4.5-5)	Soluble	Solid	300.0	3017
820-668-16	HA-4 (0-0.5)	Soluble	Solid	300.0	3017
820-668-17	HA-4 (0.5-1)	Soluble	Solid	300.0	3017
820-668-18	HA-4 (1.5-2)	Soluble	Solid	300.0	3017
820-668-19	HA-4 (3.5-4)	Soluble	Solid	300.0	3017
820-668-20	HA-4 (4.5-5)	Soluble	Solid	300.0	3017
MB 880-3017/1-A	Method Blank	Soluble	Solid	300.0	3017
LCS 880-3017/2-A	Lab Control Sample	Soluble	Solid	300.0	3017
LCSD 880-3017/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	3017
820-668-1 MS	HA-1 (0-0.5)	Soluble	Solid	300.0	3017
820-668-1 MSD	HA-1 (0-0.5)	Soluble	Solid	300.0	3017
820-668-11 MS	HA-3 (0-0.5)	Soluble	Solid	300.0	3017
820-668-11 MSD	HA-3 (0-0.5)	Soluble	Solid	300.0	3017

Analysis Batch: 3048

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
820-668-21	HA-5 (0-0.5)	Soluble	Solid	300.0	3018
820-668-22	HA-6 (0-0.5)	Soluble	Solid	300.0	3018
820-668-23	HA-7 (0-0.5)	Soluble	Solid	300.0	3018
820-668-24	HA-8 (0-0.5)	Soluble	Solid	300.0	3018
MB 880-3018/1-A	Method Blank	Soluble	Solid	300.0	3018
LCS 880-3018/2-A	Lab Control Sample	Soluble	Solid	300.0	3018
LCSD 880-3018/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	3018
820-668-21 MS	HA-5 (0-0.5)	Soluble	Solid	300.0	3018
820-668-21 MSD	HA-5 (0-0.5)	Soluble	Solid	300.0	3018

Lab Chronicle

Client: Terracon Consulting Eng & Scientists
Project/Site: Aikman SWD--Terracon

Job ID: 820-668-1
SDG: AR207018

Client Sample ID: HA-1 (0-0.5)

Lab Sample ID: 820-668-1
Matrix: Solid
Date Collected: 05/10/21 12:00
Date Received: 05/11/21 14:51

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			3013	05/12/21 09:29	KL	XM
Total/NA	Analysis	8021B		1	3016	05/12/21 16:32	KL	XM
Total/NA	Prep	8015NM Prep			3030	05/12/21 13:24	DM	XM
Total/NA	Analysis	8015B NM		1	3004	05/12/21 21:49	AJ	XM
Soluble	Leach	DI Leach			3017	05/12/21 09:36	CH	XM
Soluble	Analysis	300.0		5	3032	05/13/21 00:29	CH	XM

Client Sample ID: HA-1 (0.5-1)

Lab Sample ID: 820-668-2
Matrix: Solid
Date Collected: 05/10/21 12:02
Date Received: 05/11/21 14:51

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			3013	05/12/21 09:29	KL	XM
Total/NA	Analysis	8021B		1	3016	05/12/21 16:53	KL	XM
Total/NA	Prep	8015NM Prep			3030	05/12/21 13:24	DM	XM
Total/NA	Analysis	8015B NM		1	3004	05/12/21 22:10	AJ	XM
Soluble	Leach	DI Leach			3017	05/12/21 09:36	CH	XM
Soluble	Analysis	300.0		5	3032	05/13/21 00:45	CH	XM

Client Sample ID: HA-1 (1.5-2)

Lab Sample ID: 820-668-3
Matrix: Solid
Date Collected: 05/10/21 12:04
Date Received: 05/11/21 14:51

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			3013	05/12/21 09:29	KL	XM
Total/NA	Analysis	8021B		20	3016	05/12/21 17:14	KL	XM
Total/NA	Prep	8015NM Prep			3030	05/12/21 13:24	DM	XM
Total/NA	Analysis	8015B NM		1	3004	05/12/21 22:31	AJ	XM
Soluble	Leach	DI Leach			3017	05/12/21 09:36	CH	XM
Soluble	Analysis	300.0		1	3032	05/13/21 00:50	CH	XM

Client Sample ID: HA-1 (3.5-4)

Lab Sample ID: 820-668-4
Matrix: Solid
Date Collected: 05/10/21 12:06
Date Received: 05/11/21 14:51

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			3013	05/12/21 09:29	KL	XM
Total/NA	Analysis	8021B		20	3016	05/12/21 17:34	KL	XM
Total/NA	Prep	8015NM Prep			3030	05/12/21 13:24	DM	XM
Total/NA	Analysis	8015B NM		1	3004	05/12/21 22:59	AJ	XM
Soluble	Leach	DI Leach			3017	05/12/21 09:36	CH	XM
Soluble	Analysis	300.0		1	3032	05/13/21 00:56	CH	XM

Lab Chronicle

Client: Terracon Consulting Eng & Scientists
Project/Site: Aikman SWD--Terracon

Job ID: 820-668-1
SDG: AR207018

Client Sample ID: HA-1 (4.5-5)

Lab Sample ID: 820-668-5
Matrix: Solid
Date Collected: 05/10/21 12:08
Date Received: 05/11/21 14:51

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			3013	05/12/21 09:29	KL	XM
Total/NA	Analysis	8021B		20	3016	05/12/21 18:59	KL	XM
Total/NA	Prep	5035			3013	05/12/21 09:29	KL	XM
Total/NA	Analysis	8021B		100	3029	05/13/21 09:05	KL	XM
Total/NA	Prep	8015NM Prep			3030	05/12/21 13:24	DM	XM
Total/NA	Analysis	8015B NM		1	3004	05/12/21 23:30	AJ	XM
Soluble	Leach	DI Leach			3017	05/12/21 09:36	CH	XM
Soluble	Analysis	300.0		1	3032	05/13/21 01:01	CH	XM

Client Sample ID: HA-2 (0-0.5)

Lab Sample ID: 820-668-6
Matrix: Solid
Date Collected: 05/10/21 12:10
Date Received: 05/11/21 14:51

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			3013	05/12/21 09:29	KL	XM
Total/NA	Analysis	8021B		20	3016	05/12/21 19:19	KL	XM
Total/NA	Prep	8015NM Prep			3030	05/12/21 13:24	DM	XM
Total/NA	Analysis	8015B NM		1	3004	05/13/21 00:02	AJ	XM
Soluble	Leach	DI Leach			3017	05/12/21 09:36	CH	XM
Soluble	Analysis	300.0		20	3032	05/13/21 01:17	CH	XM

Client Sample ID: HA-2 (0.5-1)

Lab Sample ID: 820-668-7
Matrix: Solid
Date Collected: 05/10/21 12:12
Date Received: 05/11/21 14:51

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			3013	05/12/21 09:29	KL	XM
Total/NA	Analysis	8021B		20	3016	05/12/21 19:40	KL	XM
Total/NA	Prep	8015NM Prep			3030	05/12/21 13:24	DM	XM
Total/NA	Analysis	8015B NM		1	3004	05/13/21 00:23	AJ	XM
Soluble	Leach	DI Leach			3017	05/12/21 09:36	CH	XM
Soluble	Analysis	300.0		20	3032	05/13/21 01:23	CH	XM

Client Sample ID: HA-2 (1.5-2)

Lab Sample ID: 820-668-8
Matrix: Solid
Date Collected: 05/10/21 12:14
Date Received: 05/11/21 14:51

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			3013	05/12/21 09:29	KL	XM
Total/NA	Analysis	8021B		1	3016	05/13/21 08:31	KL	XM
Total/NA	Prep	8015NM Prep			3030	05/12/21 13:24	DM	XM
Total/NA	Analysis	8015B NM		1	3004	05/12/21 20:47	AJ	XM
Soluble	Leach	DI Leach			3017	05/12/21 09:36	CH	XM
Soluble	Analysis	300.0		5	3032	05/13/21 01:28	CH	XM

Lab Chronicle

Client: Terracon Consulting Eng & Scientists
Project/Site: Aikman SWD--Terracon

Job ID: 820-668-1
SDG: AR207018

Client Sample ID: HA-2 (3.5-4)

Lab Sample ID: 820-668-9
Matrix: Solid
Date Collected: 05/10/21 12:16
Date Received: 05/11/21 14:51

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			3013	05/12/21 09:29	KL	XM
Total/NA	Analysis	8021B		1	3016	05/13/21 08:52	KL	XM
Total/NA	Prep	8015NM Prep			3030	05/12/21 13:24	DM	XM
Total/NA	Analysis	8015B NM		1	3004	05/13/21 00:44	AJ	XM
Soluble	Leach	DI Leach			3017	05/12/21 09:36	CH	XM
Soluble	Analysis	300.0		1	3032	05/13/21 01:33	CH	XM

Client Sample ID: HA-2 (4.5-5)

Lab Sample ID: 820-668-10
Matrix: Solid
Date Collected: 05/10/21 12:18
Date Received: 05/11/21 14:51

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			3013	05/12/21 09:29	KL	XM
Total/NA	Analysis	8021B		1	3016	05/13/21 09:13	KL	XM
Total/NA	Prep	8015NM Prep			3030	05/12/21 13:24	DM	XM
Total/NA	Analysis	8015B NM		1	3004	05/13/21 01:04	AJ	XM
Soluble	Leach	DI Leach			3017	05/12/21 09:36	CH	XM
Soluble	Analysis	300.0		1	3032	05/13/21 01:39	CH	XM

Client Sample ID: HA-3 (0-0.5)

Lab Sample ID: 820-668-11
Matrix: Solid
Date Collected: 05/10/21 12:20
Date Received: 05/11/21 14:51

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			3013	05/12/21 09:29	KL	XM
Total/NA	Analysis	8021B		1	3016	05/13/21 09:33	KL	XM
Total/NA	Prep	8015NM Prep			3030	05/12/21 13:24	DM	XM
Total/NA	Analysis	8015B NM		1	3004	05/13/21 01:46	AJ	XM
Soluble	Leach	DI Leach			3017	05/12/21 09:36	CH	XM
Soluble	Analysis	300.0		5	3032	05/13/21 01:44	CH	XM

Client Sample ID: HA-3 (0.5-1)

Lab Sample ID: 820-668-12
Matrix: Solid
Date Collected: 05/10/21 12:22
Date Received: 05/11/21 14:51

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			3013	05/12/21 09:29	KL	XM
Total/NA	Analysis	8021B		20	3016	05/13/21 09:54	KL	XM
Total/NA	Prep	8015NM Prep			3030	05/12/21 13:24	DM	XM
Total/NA	Analysis	8015B NM		1	3004	05/13/21 02:07	AJ	XM
Soluble	Leach	DI Leach			3017	05/12/21 09:36	CH	XM
Soluble	Analysis	300.0		5	3032	05/13/21 02:00	CH	XM

Lab Chronicle

Client: Terracon Consulting Eng & Scientists
Project/Site: Aikman SWD--Terracon

Job ID: 820-668-1
SDG: AR207018

Client Sample ID: HA-3 (1.5-2)

Lab Sample ID: 820-668-13
Matrix: Solid
Date Collected: 05/10/21 12:24
Date Received: 05/11/21 14:51

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			3013	05/12/21 09:29	KL	XM
Total/NA	Analysis	8021B		1	3016	05/13/21 10:15	KL	XM
Total/NA	Prep	8015NM Prep			3030	05/12/21 13:24	DM	XM
Total/NA	Analysis	8015B NM		1	3004	05/13/21 02:27	AJ	XM
Soluble	Leach	DI Leach			3017	05/12/21 09:36	CH	XM
Soluble	Analysis	300.0		5	3032	05/13/21 02:06	CH	XM

Client Sample ID: HA-3 (3.5-4)

Lab Sample ID: 820-668-14
Matrix: Solid
Date Collected: 05/10/21 12:26
Date Received: 05/11/21 14:51

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			3013	05/12/21 09:29	KL	XM
Total/NA	Analysis	8021B		1	3016	05/13/21 10:35	KL	XM
Total/NA	Prep	8015NM Prep			3030	05/12/21 13:24	DM	XM
Total/NA	Analysis	8015B NM		1	3004	05/13/21 02:48	AJ	XM
Soluble	Leach	DI Leach			3017	05/12/21 09:36	CH	XM
Soluble	Analysis	300.0		10	3032	05/13/21 02:22	CH	XM

Client Sample ID: HA-3 (4.5-5)

Lab Sample ID: 820-668-15
Matrix: Solid
Date Collected: 05/10/21 12:28
Date Received: 05/11/21 14:51

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			3028	05/12/21 13:07	KL	XM
Total/NA	Analysis	8021B		1	3029	05/12/21 17:12	KL	XM
Total/NA	Prep	8015NM Prep			3030	05/12/21 13:24	DM	XM
Total/NA	Analysis	8015B NM		1	3004	05/13/21 03:09	AJ	XM
Soluble	Leach	DI Leach			3017	05/12/21 09:36	CH	XM
Soluble	Analysis	300.0		10	3032	05/13/21 02:27	CH	XM

Client Sample ID: HA-4 (0-0.5)

Lab Sample ID: 820-668-16
Matrix: Solid
Date Collected: 05/10/21 12:30
Date Received: 05/11/21 14:51

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			3028	05/12/21 13:07	KL	XM
Total/NA	Analysis	8021B		1	3029	05/12/21 17:32	KL	XM
Total/NA	Prep	8015NM Prep			3030	05/12/21 13:24	DM	XM
Total/NA	Analysis	8015B NM		1	3004	05/13/21 03:30	AJ	XM
Soluble	Leach	DI Leach			3017	05/12/21 09:36	CH	XM
Soluble	Analysis	300.0		5	3032	05/13/21 02:32	CH	XM

Lab Chronicle

Client: Terracon Consulting Eng & Scientists
Project/Site: Aikman SWD--Terracon

Job ID: 820-668-1
SDG: AR207018

Client Sample ID: HA-4 (0.5-1)

Lab Sample ID: 820-668-17
Matrix: Solid
Date Collected: 05/10/21 12:32
Date Received: 05/11/21 14:51

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			3028	05/12/21 13:07	KL	XM
Total/NA	Analysis	8021B		1	3029	05/12/21 17:52	KL	XM
Total/NA	Prep	8015NM Prep			3030	05/12/21 13:24	DM	XM
Total/NA	Analysis	8015B NM		1	3004	05/13/21 03:51	AJ	XM
Soluble	Leach	DI Leach			3017	05/12/21 09:36	CH	XM
Soluble	Analysis	300.0		10	3032	05/13/21 02:38	CH	XM

Client Sample ID: HA-4 (1.5-2)

Lab Sample ID: 820-668-18
Matrix: Solid
Date Collected: 05/10/21 12:34
Date Received: 05/11/21 14:51

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			3028	05/12/21 13:07	KL	XM
Total/NA	Analysis	8021B		1	3029	05/12/21 18:13	KL	XM
Total/NA	Prep	8015NM Prep			3030	05/12/21 13:24	DM	XM
Total/NA	Analysis	8015B NM		1	3004	05/13/21 04:12	AJ	XM
Soluble	Leach	DI Leach			3017	05/12/21 09:36	CH	XM
Soluble	Analysis	300.0		10	3032	05/13/21 02:43	CH	XM

Client Sample ID: HA-4 (3.5-4)

Lab Sample ID: 820-668-19
Matrix: Solid
Date Collected: 05/10/21 12:36
Date Received: 05/11/21 14:51

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			3028	05/12/21 13:07	KL	XM
Total/NA	Analysis	8021B		1	3029	05/12/21 18:33	KL	XM
Total/NA	Prep	8015NM Prep			3030	05/12/21 13:24	DM	XM
Total/NA	Analysis	8015B NM		1	3004	05/13/21 04:32	AJ	XM
Soluble	Leach	DI Leach			3017	05/12/21 09:36	CH	XM
Soluble	Analysis	300.0		5	3032	05/13/21 02:49	CH	XM

Client Sample ID: HA-4 (4.5-5)

Lab Sample ID: 820-668-20
Matrix: Solid
Date Collected: 05/10/21 12:38
Date Received: 05/11/21 14:51

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			3028	05/12/21 13:07	KL	XM
Total/NA	Analysis	8021B		1	3029	05/12/21 18:54	KL	XM
Total/NA	Prep	8015NM Prep			3030	05/12/21 13:24	DM	XM
Total/NA	Analysis	8015B NM		1	3004	05/13/21 04:53	AJ	XM
Soluble	Leach	DI Leach			3017	05/12/21 09:36	CH	XM
Soluble	Analysis	300.0		5	3032	05/13/21 02:54	CH	XM

Lab Chronicle

Client: Terracon Consulting Eng & Scientists
Project/Site: Aikman SWD--Terracon

Job ID: 820-668-1
SDG: AR207018

Client Sample ID: HA-5 (0-0.5)

Lab Sample ID: 820-668-21
Matrix: Solid
Date Collected: 05/10/21 12:40
Date Received: 05/11/21 14:51

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			3028	05/12/21 13:07	KL	XM
Total/NA	Analysis	8021B		100	3029	05/12/21 19:14	KL	XM
Total/NA	Prep	8015NM Prep			3008	05/12/21 07:52	AM	XM
Total/NA	Analysis	8015B NM		1	3004	05/13/21 07:54	AJ	XM
Soluble	Leach	DI Leach			3018	05/12/21 09:43	SC	XM
Soluble	Analysis	300.0		5	3048	05/12/21 19:37	CH	XM

Client Sample ID: HA-6 (0-0.5)

Lab Sample ID: 820-668-22
Matrix: Solid
Date Collected: 05/10/21 12:42
Date Received: 05/11/21 14:51

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			3028	05/12/21 13:07	KL	XM
Total/NA	Analysis	8021B		20	3029	05/12/21 19:34	KL	XM
Total/NA	Prep	8015NM Prep			3008	05/12/21 07:52	AM	XM
Total/NA	Analysis	8015B NM		1	3004	05/12/21 17:56	AJ	XM
Soluble	Leach	DI Leach			3018	05/12/21 09:43	SC	XM
Soluble	Analysis	300.0		10	3048	05/12/21 19:52	CH	XM

Client Sample ID: HA-7 (0-0.5)

Lab Sample ID: 820-668-23
Matrix: Solid
Date Collected: 05/10/21 12:44
Date Received: 05/11/21 14:51

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			3028	05/12/21 13:07	KL	XM
Total/NA	Analysis	8021B		1	3029	05/12/21 23:39	KL	XM
Total/NA	Prep	8015NM Prep			3008	05/12/21 07:52	AM	XM
Total/NA	Analysis	8015B NM		1	3004	05/12/21 18:23	AJ	XM
Soluble	Leach	DI Leach			3018	05/12/21 09:43	SC	XM
Soluble	Analysis	300.0		1	3048	05/12/21 19:58	CH	XM

Client Sample ID: HA-8 (0-0.5)

Lab Sample ID: 820-668-24
Matrix: Solid
Date Collected: 05/10/21 12:46
Date Received: 05/11/21 14:51

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			3028	05/12/21 13:07	KL	XM
Total/NA	Analysis	8021B		20	3029	05/13/21 00:00	KL	XM
Total/NA	Prep	8015NM Prep			3008	05/12/21 07:52	AM	XM
Total/NA	Analysis	8015B NM		1	3004	05/12/21 18:43	AJ	XM
Soluble	Leach	DI Leach			3018	05/12/21 09:43	SC	XM
Soluble	Analysis	300.0		20	3048	05/12/21 20:03	CH	XM

Laboratory References:

XM = Eurofins Xenco, Midland, 1211 W. Florida Ave, Midland, TX 79701, TEL (432)704-5440

Accreditation/Certification Summary

Client: Terracon Consulting Eng & Scientists
Project/Site: Aikman SWD--Terracon

Job ID: 820-668-1
SDG: AR207018

Laboratory: Eurofins Xenco, Midland

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
Texas	NELAP	T104704400-20-21	06-30-21

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
8015B NM	8015NM Prep	Solid	Total TPH
8021B	5035	Solid	Total BTEX

Method Summary

Client: Terracon Consulting Eng & Scientists
Project/Site: Aikman SWD--Terracon

Job ID: 820-668-1
SDG: AR207018

Method	Method Description	Protocol	Laboratory
8021B	Volatile Organic Compounds (GC)	SW846	XM
8015B NM	Diesel Range Organics (DRO) (GC)	SW846	XM
300.0	Anions, Ion Chromatography	MCAWW	XM
5035	Closed System Purge and Trap	SW846	XM
8015NM Prep	Microextraction	SW846	XM
DI Leach	Deionized Water Leaching Procedure	ASTM	XM

Protocol References:

ASTM = ASTM International

MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions.

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

XM = Eurofins Xenco, Midland, 1211 W. Florida Ave, Midland, TX 79701, TEL (432)704-5440

Sample Summary

Client: Terracon Consulting Eng & Scientists
Project/Site: Aikman SWD--Terracon

Job ID: 820-668-1
SDG: AR207018

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
820-668-1	HA-1 (0-0.5)	Solid	05/10/21 12:00	05/11/21 14:51	
820-668-2	HA-1 (0.5-1)	Solid	05/10/21 12:02	05/11/21 14:51	
820-668-3	HA-1 (1.5-2)	Solid	05/10/21 12:04	05/11/21 14:51	
820-668-4	HA-1 (3.5-4)	Solid	05/10/21 12:06	05/11/21 14:51	
820-668-5	HA-1 (4.5-5)	Solid	05/10/21 12:08	05/11/21 14:51	
820-668-6	HA-2 (0-0.5)	Solid	05/10/21 12:10	05/11/21 14:51	
820-668-7	HA-2 (0.5-1)	Solid	05/10/21 12:12	05/11/21 14:51	
820-668-8	HA-2 (1.5-2)	Solid	05/10/21 12:14	05/11/21 14:51	
820-668-9	HA-2 (3.5-4)	Solid	05/10/21 12:16	05/11/21 14:51	
820-668-10	HA-2 (4.5-5)	Solid	05/10/21 12:18	05/11/21 14:51	
820-668-11	HA-3 (0-0.5)	Solid	05/10/21 12:20	05/11/21 14:51	
820-668-12	HA-3 (0.5-1)	Solid	05/10/21 12:22	05/11/21 14:51	
820-668-13	HA-3 (1.5-2)	Solid	05/10/21 12:24	05/11/21 14:51	
820-668-14	HA-3 (3.5-4)	Solid	05/10/21 12:26	05/11/21 14:51	
820-668-15	HA-3 (4.5-5)	Solid	05/10/21 12:28	05/11/21 14:51	
820-668-16	HA-4 (0-0.5)	Solid	05/10/21 12:30	05/11/21 14:51	
820-668-17	HA-4 (0.5-1)	Solid	05/10/21 12:32	05/11/21 14:51	
820-668-18	HA-4 (1.5-2)	Solid	05/10/21 12:34	05/11/21 14:51	
820-668-19	HA-4 (3.5-4)	Solid	05/10/21 12:36	05/11/21 14:51	
820-668-20	HA-4 (4.5-5)	Solid	05/10/21 12:38	05/11/21 14:51	
820-668-21	HA-5 (0-0.5)	Solid	05/10/21 12:40	05/11/21 14:51	
820-668-22	HA-6 (0-0.5)	Solid	05/10/21 12:42	05/11/21 14:51	
820-668-23	HA-7 (0-0.5)	Solid	05/10/21 12:44	05/11/21 14:51	
820-668-24	HA-8 (0-0.5)	Solid	05/10/21 12:46	05/11/21 14:51	

Released to Imaging: 8/29/2023 1:29:02 PM

Received by OCD: 4/10/2023 1:07:45 PM

CHAIN OF CUSTODY RECORD

Terracon

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

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

Project Number: AR207018
Project Name: Aikman SWD

ANALYSIS REQUESTED

LAB USE ONLY
DUE DATE:
TEMP OF COOLER WHEN RECEIVED (°C): 2.1/208

Page 1 of 2

Matrix	Date	Time	Comp	Grab	Identifying Marks of Sample(s)	Start Depth	End Depth	No. Type of Containers: 4 oz Glass	40 ml VOA	250 ml Poly	5035 kit	Chloride (EPA Method 300)	BTEX (EPA Method 8021B)	TPH Extended 8015	Lab Sample ID
S	5/10/2021	12:00		X	HA-1 (0-0.5)	0	0.5'	X				X	X	X	820-668-1
S	5/10/2021	12:02		X	HA-1 (0.5-1)	0.5'	1'	X				X	X	X	2
S	5/10/2021	12:04		X	HA-1 (1.5-2)	1.5'	2'	X				X	X	X	3
S	5/10/2021	12:06		X	HA-1 (3.5-4)	3.5'	4'	X				X	X	X	4
S	5/10/2021	12:08		X	HA-1 (4.5-5)	4.5'	5'	X				X	X	X	5
S	5/10/2021	12:10		X	HA-2 (0-0.5)	0	0.5'	X				X	X	X	6
S	5/10/2021	12:12		X	HA-2 (0.5-1)	0.5'	1'	X				X	X	X	7
S	5/10/2021	12:14		X	HA-2 (1.5-2)	1.5'	2'	X				X	X	X	8
S	5/10/2021	12:16		X	HA-2 (3.5-4)	3.5'	4'	X				X	X	X	9
S	5/10/2021	12:18		X	HA-2 (4.5-5)	4.5'	5'	X				X	X	X	10
S	5/10/2021	12:20		X	HA-3 (0-0.5)	0	0.5'	X				X	X	X	11
S	5/10/2021	12:22		X	HA-3 (0.5-1)	0.5'	1'	X				X	X	X	12
S	5/10/2021	12:24		X	HA-3 (1.5-2)	1.5'	2'	X				X	X	X	13
S	5/10/2021	12:26		X	HA-3 (3.5-4)	3.5'	4'	X				X	X	X	14
S	5/10/2021	12:28		X	HA-3 (4.5-5)	4.5'	5'	X				X	X	X	15
S	5/10/2021	12:30		X	HA-4 (0-0.5)	0	0.5'	X				X	X	X	16
S	5/10/2021	12:32		X	HA-4 (0.5-1)	0.5'	1'	X				X	X	X	17
S	5/10/2021	12:34		X	HA-4 (1.5-2)	1.5'	2'	X				X	X	X	18
S	5/10/2021	12:36		X	HA-4 (3.5-4)	3.5'	4'	X				X	X	X	19
S	5/10/2021	12:38		X	HA-4 (4.5-5)	4.5'	5'	X				X	X	X	20
S	5/10/2021	12:40		X	HA-5 (0-0.5)	0	0.5	X				X	X	X	21

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

TRRP Laboratory Review Checklist: ☐ Yes ☐ No

Relinquished by (Signature)	Date	Time	Received by (Signature)	Date	Time
[signature]	5-11-21	14:51	[signature]	5/11/21	14:51

NOTES: Client: Spur Energy Partners

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

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

820-668-01 Chain of Custody

Loc: 820
668

Released to Imaging: 8/29/2023 1:29:02 PM

Received by OCD: 4/10/2023 1:07:45 PM

Log: 820
668

CHAIN OF CUSTODY RECORD

Terracon

Laboratory: Xenco
Address: 6701 Aberdeen
Lubbock, Texas 79424

Office Location: Lubbock
Phone:
Project Manager: J. Guesnier
Contact: J. Guesnier 806-544-9276
Sampler's Name: J. Guesnier
SRS #:
Sampler's Signature

Project Number: AR207018
Project Name: Aikman SWD

ANALYSIS REQUESTED

LAB USE ONLY
DUE DATE:

TEMP OF COOLER WHEN RECEIVED (°C): 2.1/208

Page 2 of 2

Matrix	Date	Time	Comp	Grab	Identifying Marks of Sample(s)	Start Depth	End Depth	No. Type of Containers: 4 oz Glass	40 ml VOA	250 ml Poly	5035 kit	Chloride (EPA Method 300)	BTEX (EPA Method 8021B)	TPH Extended 8015	Lab Sample ID
S	5/10/2021	12:42		X	HA-6 (0-0.5)	0	0.5'	X				X	X	X	820-608-22
S	5/10/2021	12:44		X	HA-7 (0-0.5)	0	0.5'	X				X	X	X	23
S	5/10/2021	12:46		X	HA-8 (0-0.5)	0	0.5'	X				X	X	X	24

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

TRRP Laboratory Review Checklist: ☐ Yes ☐ No

Relinquished by (Signature)	Date:	Time:	Received by (Signature)	Date:	Time:
[signature]	5-11-21	14:57	[signature]	5/11/21	14:57

NOTES: Client: Spur Energy Partners

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

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

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Chain of Custody Record

eurofins | Environment Testing America

Client Information (Sub Contract Lab)	Sampler	Lab PM: Kramer, Jessica	Carrier Tracking No(s)	COC No: 820-904 1
Client Contact: Shipping/Receiving	Phone	E-Mail: jessica kramer@eurofinset.com	State of Origin: New Mexico	Page: Page 1 of 3
Company: Eurofins Xenco		Accreditations Required (See note): NELAP - Texas		Job #: 820-668-1
Address: 1211 W Florida Ave ,	Due Date Requested: 5/13/2021			
City: Midland	TAT Requested (days):			
State, Zip: TX, 79701				
Phone: 432-704-5440(Tel)	PO #:			
Email:	WO #:			
Project Name: Aikman SWD--Terracon	Project #: 82000268			
Site:	SSOW#:			

Analysis Requested

Preservation Codes

A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F MeOH, G - Amchlor, H Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S H2SO4, T - TSP Dodecahydrate, U - Acetone, V MCAA, W - pH 4-5, Z - other (specify)

Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	8021B/5035FP_Calc BTEX	8015MOD_NM/8015NM_S_Prep Full TPH	300_ORGFM_28D/DI_LEACH Chloride	Total Number of containers	Special Instructions/Note:
			Preservation Code:								
HA-1 (0-0 5) (820-668-1)	5/10/21	12 00 Mountain		Solid			X	X	X	1	
HA-1 (0 5-1) (820-668-2)	5/10/21	12 02 Mountain		Solid			X	X	X	1	
HA-1 (1.5-2) (820-668-3)	5/10/21	12 04 Mountain		Solid			X	X	X	1	
HA-1 (3.5-4) (820-668-4)	5/10/21	12 06 Mountain		Solid			X	X	X	1	
HA-1 (4.5-5) (820-668-5)	5/10/21	12 08 Mountain		Solid			X	X	X	1	
HA-2 (0-0 5) (820-668-6)	5/10/21	12.10 Mountain		Solid			X	X	X	1	
HA-2 (0.5-1) (820-668-7)	5/10/21	12.12 Mountain		Solid			X	X	X	1	
HA-2 (1 5-2) (820-668-8)	5/10/21	12 14 Mountain		Solid			X	X	X	1	
HA-2 (3 5-4) (820-668-9)	5/10/21	12.16 Mountain		Solid			X	X	X	1	

Note: Since laboratory accreditations are subject to change, Eurofins Xenco LLC places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed the samples must be shipped back to the Eurofins Xenco LLC laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins Xenco LLC attention immediately If all requested accreditations are current to date return the signed Chain of Custody attesting to said complicance to Eurofins Xenco LLC.

Possible Hazard Identification	***Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)***
Unconfirmed	☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For* _____ *Months*
Deliverable Requested I, II, III IV, Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements.

Empty Kit Relinquished by:	Date	Time:	Method of Shipment:

	Relinquished by	Date/Time	Company	Received by	Date/Time	Company
1		5/11/21 15:47			5-12-21 11:30am	
2	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
3	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No	Cooler Temperature(s) °C and Other Remarks:

Ver: 11/01/2020

Received by OCD: 4/10/2023 1:07:45 PM

Released to Imaging: 8/29/2023 1:29:02 PM

5/13/2021

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Chain of Custody Record

eurofins | Environment Testing America

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Kramer, Jessica	Carrier Tracking No(s):	COC No: 820-904 3
Client Contact: Shipping/Receiving	Phone	E-Mail: jessica.kramer@eurofinset.com	State of Origin: New Mexico	Page: Page 3 of 3
Company: Eurofins Xenco		Accreditations Required (See note): NELAP - Texas		Job #: 820-668-1
Address: 1211 W Florida Ave	Due Date Requested: 5/13/2021			
City: Midland	TAT Requested (days):			
State, Zip: TX, 79701				
Phone: 432-704-5440(Tel)	PO #:			
Email	WO #:			
Project Name: Aikman SWD--Terracon	Project #: 82000268			
Site:	SSOW#:			

Analysis Requested

Preservation Codes

A HCL, B NaOH, C Zn Acetate, D - Nitric Acid, E NaHSO4, F - MeOH, G Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L EDA, M - Hexane, N None, O AsNaO2, P - Na2O4S, Q Na2SO3, R - Na2S2O3, S H2SO4, T TSP Dodecahydrate, U Acetone, V - MCAA, W pH 4-5, Z - other (specify)

Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	8021B/5035FP_Calc BTEX	8015MOD_NM/8015NM_S_Prep Full TPH	300_ORGFM_28D/DI_LEACH Chloride	Total Number of containers	Special Instructions/Note:
			Preservation Code:								
HA-4 (3 5-4) (820-668-19)	5/10/21	12 36 Mountain		Solid			X	X	X	1	
HA-4 (4 5-5) (820-668-20)	5/10/21	12 38 Mountain		Solid			X	X	X	1	
HA-5 (0-0 5) (820-668-21)	5/10/21	12 40 Mountain		Solid			X	X	X	1	
HA-6 (0-0 5) (820-668-22)	5/10/21	12 42 Mountain		Solid			X	X	X	1	
HA-7 (0-0 5) (820-668-23)	5/10/21	12 44 Mountain		Solid			X	X	X	1	
HA-8 (0-0 5) (820-668-24)	5/10/21	12.46 Mountain		Solid			X	X	X	1	

Note. Since laboratory accreditations are subject to change, Eurofins Xenco LLC places the ownership of method analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the Eurofins Xenco LLC laboratory or other instructions will be provided Any changes to accreditation status should be brought to Eurofins Xenco LLC attention immediately If all requested accreditations are current to date, return the signed Chain of Custody attesting to said complicance to Eurofins Xenco LLC.

Possible Hazard Identification	Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
Unconfirmed	☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months
Deliverable Requested: I II, III IV, Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
1		5/11/21 15:47			5-12-21 10:30 a.m.	
2	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
3	Relinquished by:	Date/Time	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.	Cooler Temperature(s) °C and Other Remarks.

Ver: 11/01/2020

Received by OCD: 4/10/2023 1:07:45 PM

Released to Imaging: 8/29/2023 1:29:02 PM

Login Sample Receipt Checklist

Client: Terracon Consulting Eng & Scientists

Job Number: 820-668-1
SDG Number: AR207018

Login Number: 668
List Number: 1
Creator: Turner, Michael

List Source: Eurofins Lubbock

Question	Answer	Comment
The cooler's custody seal, if present, is intact.	N/A	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	

Login Sample Receipt Checklist

Client: Terracon Consulting Eng & Scientists

Job Number: 820-668-1
SDG Number: AR207018

Login Number: 668
List Number: 2
Creator: Copeland, Tatiana

List Source: Eurofins Midland
List Creation: 05/12/21 11:35 AM

Question	Answer	Comment
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	

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ANALYTICAL REPORT

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

Laboratory Job ID: 820-779-1
Client Project/Site: Aikman SWD
Revision: 1

For:
Terracon Consulting Eng & Scientists
5827 50th St
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Attn: Joseph Guesnier

JKramer

Authorized for release by:
5/31/2021 12:42:23 PM

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LINKS

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Results relate only to the items tested and the sample(s) as received by the laboratory.

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

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

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

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

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

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

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

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

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

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

JKramer

Jessica Kramer
Project Manager
5/31/2021 12:42:23 PM

Client: Terracon Consulting Eng & Scientists
Project/Site: Aikman SWD

Laboratory Job ID: 820-779-1

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Definitions/Glossary

Client: Terracon Consulting Eng & Scientists Job ID: 820-779-1
Project/Site: Aikman SWD

Qualifiers

GC Semi VOA

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.

HPLC/IC

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.

Glossary

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

Case Narrative

Client: Terracon Consulting Eng & Scientists
Project/Site: Aikman SWD

Job ID: 820-779-1

Job ID: 820-779-1

Laboratory: Eurofins Xenco, Lubbock

Narrative

Job Narrative
820-779-1

Receipt
The samples were received on 5/24/2021 4:25 PM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was -9.1°C

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

Job ID: 820-779-2

Laboratory: Eurofins Xenco, Lubbock

Narrative

Job Narrative
820-779-2

Receipt
The samples were received on 5/24/2021 4:25 PM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was -9.1°C

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

Client Sample Results

Client: Terracon Consulting Eng & Scientists Job ID: 820-779-1
Project/Site: Aikman SWD

Client Sample ID: GP-1 (4-5) Lab Sample ID: 820-779-1

Date Collected: 05/21/21 11:35 **Matrix: Solid**
Date Received: 05/24/21 16:25
Sample Depth: 4 - 5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9		mg/Kg		05/27/21 09:15	05/28/21 15:56	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		05/27/21 09:15	05/28/21 15:56	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		05/27/21 09:15	05/28/21 15:56	1
Total TPH	<49.9	U	49.9		mg/Kg		05/27/21 09:15	05/28/21 15:56	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*92*		*70 - 130*	*05/27/21 09:15*	*05/28/21 15:56*	*1*
o-Terphenyl	*80*		*70 - 130*	*05/27/21 09:15*	*05/28/21 15:56*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**172**		5.05		mg/Kg			05/25/21 15:32	1

Client Sample ID: GP-1 (5-6) Lab Sample ID: 820-779-2

Date Collected: 05/21/21 11:37 **Matrix: Solid**
Date Received: 05/24/21 16:25
Sample Depth: 5 - 6

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.8	U	49.8		mg/Kg		05/27/21 09:15	05/28/21 17:00	1
Diesel Range Organics (Over C10-C28)	<49.8	U	49.8		mg/Kg		05/27/21 09:15	05/28/21 17:00	1
Oil Range Organics (Over C28-C36)	<49.8	U	49.8		mg/Kg		05/27/21 09:15	05/28/21 17:00	1
Total TPH	<49.8	U	49.8		mg/Kg		05/27/21 09:15	05/28/21 17:00	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*92*		*70 - 130*	*05/27/21 09:15*	*05/28/21 17:00*	*1*
o-Terphenyl	*79*		*70 - 130*	*05/27/21 09:15*	*05/28/21 17:00*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**276**		5.02		mg/Kg			05/25/21 15:47	1

Client Sample ID: GP-1 (6-7) Lab Sample ID: 820-779-3

Date Collected: 05/21/21 11:39 **Matrix: Solid**
Date Received: 05/24/21 16:25
Sample Depth: 6 - 7

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.8	U	49.8		mg/Kg		05/27/21 09:15	05/28/21 17:21	1
Diesel Range Organics (Over C10-C28)	<49.8	U	49.8		mg/Kg		05/27/21 09:15	05/28/21 17:21	1
Oil Range Organics (Over C28-C36)	<49.8	U	49.8		mg/Kg		05/27/21 09:15	05/28/21 17:21	1
Total TPH	<49.8	U	49.8		mg/Kg		05/27/21 09:15	05/28/21 17:21	1

Client Sample Results

Client: Terracon Consulting Eng & Scientists
Project/Site: Aikman SWD

Job ID: 820-779-1

Client Sample ID: GP-1 (6-7)

Lab Sample ID: 820-779-3
Matrix: Solid
Date Collected: 05/21/21 11:39
Date Received: 05/24/21 16:25
Sample Depth: 6 - 7

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	91		70 - 130	05/27/21 09:15	05/28/21 17:21	1
o-Terphenyl	79		70 - 130	05/27/21 09:15	05/28/21 17:21	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	490		5.03		mg/Kg			05/25/21 15:52	1

Client Sample ID: GP-1 (7-8)

Lab Sample ID: 820-779-4
Matrix: Solid
Date Collected: 05/21/21 11:41
Date Received: 05/24/21 16:25
Sample Depth: 7 - 8

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9		mg/Kg		05/27/21 09:15	05/28/21 17:43	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		05/27/21 09:15	05/28/21 17:43	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		05/27/21 09:15	05/28/21 17:43	1
Total TPH	<49.9	U	49.9		mg/Kg		05/27/21 09:15	05/28/21 17:43	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	94		70 - 130	05/27/21 09:15	05/28/21 17:43	1
o-Terphenyl	81		70 - 130	05/27/21 09:15	05/28/21 17:43	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	528		5.01		mg/Kg			05/25/21 15:57	1

Client Sample ID: GP-1 (8-9)

Lab Sample ID: 820-779-5
Matrix: Solid
Date Collected: 05/21/21 11:43
Date Received: 05/24/21 16:25
Sample Depth: 8 - 9

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.8	U	49.8		mg/Kg		05/27/21 09:15	05/28/21 18:04	1
Diesel Range Organics (Over C10-C28)	<49.8	U	49.8		mg/Kg		05/27/21 09:15	05/28/21 18:04	1
Oil Range Organics (Over C28-C36)	<49.8	U	49.8		mg/Kg		05/27/21 09:15	05/28/21 18:04	1
Total TPH	<49.8	U	49.8		mg/Kg		05/27/21 09:15	05/28/21 18:04	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	95		70 - 130	05/27/21 09:15	05/28/21 18:04	1
o-Terphenyl	81		70 - 130	05/27/21 09:15	05/28/21 18:04	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	383		4.99		mg/Kg			05/25/21 16:03	1

Client Sample Results

Client: Terracon Consulting Eng & Scientists
Project/Site: Aikman SWD

Job ID: 820-779-1

Client Sample ID: GP-1 (9-10)

Lab Sample ID: 820-779-6
Matrix: Solid
Date Collected: 05/21/21 11:45
Date Received: 05/24/21 16:25
Sample Depth: 9 - 10

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9		mg/Kg		05/27/21 09:15	05/28/21 18:26	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		05/27/21 09:15	05/28/21 18:26	1
OII Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		05/27/21 09:15	05/28/21 18:26	1
Total TPH	<49.9	U	49.9		mg/Kg		05/27/21 09:15	05/28/21 18:26	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*95*		*70 - 130*	*05/27/21 09:15*	*05/28/21 18:26*	*1*
o-Terphenyl	*83*		*70 - 130*	*05/27/21 09:15*	*05/28/21 18:26*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	225		4.99		mg/Kg			05/25/21 16:18	1

Client Sample ID: GP-1 (10-11)

Lab Sample ID: 820-779-7
Matrix: Solid
Date Collected: 05/21/21 11:47
Date Received: 05/24/21 16:25
Sample Depth: 10 - 11

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		05/27/21 09:15	05/28/21 18:47	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		05/27/21 09:15	05/28/21 18:47	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		05/27/21 09:15	05/28/21 18:47	1
Total TPH	<50.0	U	50.0		mg/Kg		05/27/21 09:15	05/28/21 18:47	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*95*		*70 - 130*	*05/27/21 09:15*	*05/28/21 18:47*	*1*
o-Terphenyl	*81*		*70 - 130*	*05/27/21 09:15*	*05/28/21 18:47*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	228		4.96		mg/Kg			05/25/21 16:38	1

Client Sample ID: GP-1 (11-12)

Lab Sample ID: 820-779-8
Matrix: Solid
Date Collected: 05/21/21 11:49
Date Received: 05/24/21 16:25
Sample Depth: 11 - 12

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9		mg/Kg		05/27/21 09:15	05/28/21 19:08	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		05/27/21 09:15	05/28/21 19:08	1
OII Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		05/27/21 09:15	05/28/21 19:08	1
Total TPH	<49.9	U	49.9		mg/Kg		05/27/21 09:15	05/28/21 19:08	1

Client Sample Results

Client: Terracon Consulting Eng & Scientists
Project/Site: Aikman SWD

Job ID: 820-779-1

Client Sample ID: GP-1 (11-12)

Lab Sample ID: 820-779-8
Matrix: Solid
Date Collected: 05/21/21 11:49
Date Received: 05/24/21 16:25
Sample Depth: 11 - 12

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	95		70 - 130	05/27/21 09:15	05/28/21 19:08	1
o-Terphenyl	84		70 - 130	05/27/21 09:15	05/28/21 19:08	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	143		4.97		mg/Kg			05/25/21 16:43	1

Client Sample ID: GP-2 (0-1)

Lab Sample ID: 820-779-9
Matrix: Solid
Date Collected: 05/21/21 12:00
Date Received: 05/24/21 16:25
Sample Depth: 0 - 1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		05/27/21 09:15	05/28/21 19:30	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		05/27/21 09:15	05/28/21 19:30	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		05/27/21 09:15	05/28/21 19:30	1
Total TPH	<50.0	U	50.0		mg/Kg		05/27/21 09:15	05/28/21 19:30	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	95		70 - 130	05/27/21 09:15	05/28/21 19:30	1
o-Terphenyl	80		70 - 130	05/27/21 09:15	05/28/21 19:30	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	3550		50.0		mg/Kg			05/25/21 16:49	10

Client Sample ID: GP-2 (1-2)

Lab Sample ID: 820-779-10
Matrix: Solid
Date Collected: 05/21/21 12:02
Date Received: 05/24/21 16:25
Sample Depth: 1 - 2

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		05/27/21 09:15	05/28/21 19:51	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		05/27/21 09:15	05/28/21 19:51	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		05/27/21 09:15	05/28/21 19:51	1
Total TPH	<50.0	U	50.0		mg/Kg		05/27/21 09:15	05/28/21 19:51	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	96		70 - 130	05/27/21 09:15	05/28/21 19:51	1
o-Terphenyl	86		70 - 130	05/27/21 09:15	05/28/21 19:51	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	252		5.00		mg/Kg			05/25/21 16:54	1

Client Sample Results

Client: Terracon Consulting Eng & Scientists
Project/Site: Aikman SWD

Job ID: 820-779-1

Client Sample ID: GP-2 (2-3)

Lab Sample ID: 820-779-11
Matrix: Solid
Date Collected: 05/21/21 12:04
Date Received: 05/24/21 16:25
Sample Depth: 2 - 3

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.8	U	49.8		mg/Kg		05/27/21 09:15	05/28/21 20:33	1
Diesel Range Organics (Over C10-C28)	<49.8	U	49.8		mg/Kg		05/27/21 09:15	05/28/21 20:33	1
Oil Range Organics (Over C28-C36)	<49.8	U	49.8		mg/Kg		05/27/21 09:15	05/28/21 20:33	1
Total TPH	<49.8	U	49.8		mg/Kg		05/27/21 09:15	05/28/21 20:33	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*95*		*70 - 130*	*05/27/21 09:15*	*05/28/21 20:33*	*1*
o-Terphenyl	*84*		*70 - 130*	*05/27/21 09:15*	*05/28/21 20:33*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	34.0		4.95		mg/Kg			05/25/21 16:59	1

Client Sample ID: GP-2 (3-4)

Lab Sample ID: 820-779-12
Matrix: Solid
Date Collected: 05/21/21 12:06
Date Received: 05/24/21 16:25
Sample Depth: 3 - 4

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9		mg/Kg		05/27/21 09:15	05/28/21 20:54	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		05/27/21 09:15	05/28/21 20:54	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		05/27/21 09:15	05/28/21 20:54	1
Total TPH	<49.9	U	49.9		mg/Kg		05/27/21 09:15	05/28/21 20:54	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*95*		*70 - 130*	*05/27/21 09:15*	*05/28/21 20:54*	*1*
o-Terphenyl	*84*		*70 - 130*	*05/27/21 09:15*	*05/28/21 20:54*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	40.9		5.02		mg/Kg			05/25/21 17:15	1

Client Sample ID: GP-2 (4-5)

Lab Sample ID: 820-779-13
Matrix: Solid
Date Collected: 05/21/21 12:08
Date Received: 05/24/21 16:25
Sample Depth: 4 - 5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9		mg/Kg		05/27/21 09:15	05/28/21 21:16	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		05/27/21 09:15	05/28/21 21:16	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		05/27/21 09:15	05/28/21 21:16	1
Total TPH	<49.9	U	49.9		mg/Kg		05/27/21 09:15	05/28/21 21:16	1

Client Sample Results

Client: Terracon Consulting Eng & Scientists
Project/Site: Aikman SWD

Job ID: 820-779-1

Client Sample ID: GP-2 (4-5)

Lab Sample ID: 820-779-13
Matrix: Solid
Date Collected: 05/21/21 12:08
Date Received: 05/24/21 16:25
Sample Depth: 4 - 5

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	93		70 - 130	05/27/21 09:15	05/28/21 21:16	1
o-Terphenyl	80		70 - 130	05/27/21 09:15	05/28/21 21:16	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	78.0		5.05		mg/Kg			05/25/21 17:20	1

Client Sample ID: GP-2 (5-6)

Lab Sample ID: 820-779-14
Matrix: Solid
Date Collected: 05/21/21 12:10
Date Received: 05/24/21 16:25
Sample Depth: 5 - 6

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9		mg/Kg		05/27/21 09:15	05/28/21 21:37	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		05/27/21 09:15	05/28/21 21:37	1
OII Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		05/27/21 09:15	05/28/21 21:37	1
Total TPH	<49.9	U	49.9		mg/Kg		05/27/21 09:15	05/28/21 21:37	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	91		70 - 130	05/27/21 09:15	05/28/21 21:37	1
o-Terphenyl	77		70 - 130	05/27/21 09:15	05/28/21 21:37	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	52.2		5.04		mg/Kg			05/25/21 17:35	1

Client Sample ID: GP-2 (6-7)

Lab Sample ID: 820-779-15
Matrix: Solid
Date Collected: 05/21/21 12:12
Date Received: 05/24/21 16:25
Sample Depth: 6 - 7

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		05/27/21 09:15	05/28/21 21:58	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		05/27/21 09:15	05/28/21 21:58	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		05/27/21 09:15	05/28/21 21:58	1
Total TPH	<50.0	U	50.0		mg/Kg		05/27/21 09:15	05/28/21 21:58	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	100		70 - 130	05/27/21 09:15	05/28/21 21:58	1
o-Terphenyl	86		70 - 130	05/27/21 09:15	05/28/21 21:58	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	58.0		5.04		mg/Kg			05/25/21 17:40	1

Client Sample Results

Client: Terracon Consulting Eng & Scientists
Project/Site: Aikman SWD

Job ID: 820-779-1

Client Sample ID: GP-2 (7-8)

Lab Sample ID: 820-779-16
Matrix: Solid
Date Collected: 05/21/21 12:14
Date Received: 05/24/21 16:25
Sample Depth: 7 - 8

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		05/27/21 09:15	05/28/21 22:20	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		05/27/21 09:15	05/28/21 22:20	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		05/27/21 09:15	05/28/21 22:20	1
Total TPH	<50.0	U	50.0		mg/Kg		05/27/21 09:15	05/28/21 22:20	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*96*		*70 - 130*	*05/27/21 09:15*	*05/28/21 22:20*	*1*
o-Terphenyl	*83*		*70 - 130*	*05/27/21 09:15*	*05/28/21 22:20*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**60.8**		4.97		mg/Kg			05/25/21 17:45	1

Client Sample ID: GP-2 (8-9)

Lab Sample ID: 820-779-17
Matrix: Solid
Date Collected: 05/21/21 12:16
Date Received: 05/24/21 16:25
Sample Depth: 8 - 9

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9		mg/Kg		05/27/21 09:15	05/28/21 22:41	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		05/27/21 09:15	05/28/21 22:41	1
OII Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		05/27/21 09:15	05/28/21 22:41	1
Total TPH	<49.9	U	49.9		mg/Kg		05/27/21 09:15	05/28/21 22:41	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*93*		*70 - 130*	*05/27/21 09:15*	*05/28/21 22:41*	*1*
o-Terphenyl	*81*		*70 - 130*	*05/27/21 09:15*	*05/28/21 22:41*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**75.0**		4.96		mg/Kg			05/25/21 17:51	1

Client Sample ID: GP-2 (9-10)

Lab Sample ID: 820-779-18
Matrix: Solid
Date Collected: 05/21/21 12:18
Date Received: 05/24/21 16:25
Sample Depth: 9 - 10

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		05/27/21 09:15	05/28/21 23:02	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		05/27/21 09:15	05/28/21 23:02	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		05/27/21 09:15	05/28/21 23:02	1
Total TPH	<50.0	U	50.0		mg/Kg		05/27/21 09:15	05/28/21 23:02	1

Client Sample Results

Client: Terracon Consulting Eng & Scientists
Project/Site: Aikman SWD

Job ID: 820-779-1

Client Sample ID: GP-2 (9-10)

Lab Sample ID: 820-779-18
Matrix: Solid
Date Collected: 05/21/21 12:18
Date Received: 05/24/21 16:25
Sample Depth: 9 - 10

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	92		70 - 130	05/27/21 09:15	05/28/21 23:02	1
o-Terphenyl	81		70 - 130	05/27/21 09:15	05/28/21 23:02	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	64.4		4.97		mg/Kg			05/25/21 17:56	1

Client Sample ID: GP-2 (10-11)

Lab Sample ID: 820-779-19
Matrix: Solid
Date Collected: 05/21/21 12:20
Date Received: 05/24/21 16:25
Sample Depth: 10 - 11

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9		mg/Kg		05/27/21 09:15	05/28/21 23:24	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		05/27/21 09:15	05/28/21 23:24	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		05/27/21 09:15	05/28/21 23:24	1
Total TPH	<49.9	U	49.9		mg/Kg		05/27/21 09:15	05/28/21 23:24	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	91		70 - 130	05/27/21 09:15	05/28/21 23:24	1
o-Terphenyl	79		70 - 130	05/27/21 09:15	05/28/21 23:24	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	94.4		4.98		mg/Kg			05/25/21 18:01	1

Client Sample ID: GP-2 (11-12)

Lab Sample ID: 820-779-20
Matrix: Solid
Date Collected: 05/21/21 12:22
Date Received: 05/24/21 16:25
Sample Depth: 11 - 12

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		05/27/21 09:15	05/28/21 23:45	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		05/27/21 09:15	05/28/21 23:45	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		05/27/21 09:15	05/28/21 23:45	1
Total TPH	<50.0	U	50.0		mg/Kg		05/27/21 09:15	05/28/21 23:45	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	95		70 - 130	05/27/21 09:15	05/28/21 23:45	1
o-Terphenyl	83		70 - 130	05/27/21 09:15	05/28/21 23:45	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	104		5.00		mg/Kg			05/25/21 18:06	1

Surrogate Summary

Client: Terracon Consulting Eng & Scientists
Project/Site: Aikman SWD

Job ID: 820-779-1

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

Matrix: Solid **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)											
Lab Sample ID	Client Sample ID	1CO1 (70-130)	OTPH1 (70-130)										
820-779-1	GP-1 (4-5)	92	80										
820-779-1 MS	GP-1 (4-5)	94	73										
820-779-1 MSD	GP-1 (4-5)	94	72										
820-779-2	GP-1 (5-6)	92	79										
820-779-3	GP-1 (6-7)	91	79										
820-779-4	GP-1 (7-8)	94	81										
820-779-5	GP-1 (8-9)	95	81										
820-779-6	GP-1 (9-10)	95	83										
820-779-7	GP-1 (10-11)	95	81										
820-779-8	GP-1 (11-12)	95	84										
820-779-9	GP-2 (0-1)	95	80										
820-779-10	GP-2 (1-2)	96	86										
820-779-11	GP-2 (2-3)	95	84										
820-779-12	GP-2 (3-4)	95	84										
820-779-13	GP-2 (4-5)	93	80										
820-779-14	GP-2 (5-6)	91	77										
820-779-15	GP-2 (6-7)	100	86										
820-779-16	GP-2 (7-8)	96	83										
820-779-17	GP-2 (8-9)	93	81										
820-779-18	GP-2 (9-10)	92	81										
820-779-19	GP-2 (10-11)	91	79										
820-779-20	GP-2 (11-12)	95	83										
LCS 880-3560/2-A	Lab Control Sample	94	75										
LCSD 880-3560/3-A	Lab Control Sample Dup	92	72										
MB 880-3560/1-A	Method Blank	95	81										

Surrogate Legend

1CO = 1-Chlorooctane
OTPH = o-Terphenyl

QC Sample Results

Client: Terracon Consulting Eng & Scientists
Project/Site: Aikman SWD

Job ID: 820-779-1

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

Lab Sample ID: MB 880-3560/1-A
Matrix: Solid
Analysis Batch: 3614

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 3560

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		05/27/21 09:15	05/28/21 14:51	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		05/27/21 09:15	05/28/21 14:51	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		05/27/21 09:15	05/28/21 14:51	1
Total TPH	<50.0	U	50.0		mg/Kg		05/27/21 09:15	05/28/21 14:51	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*95*		*70 - 130*	*05/27/21 09:15*	*05/28/21 14:51*	*1*
o-Terphenyl	*81*		*70 - 130*	*05/27/21 09:15*	*05/28/21 14:51*	*1*

Lab Sample ID: LCS 880-3560/2-A
Matrix: Solid
Analysis Batch: 3614

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 3560

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Gasoline Range Organics (GRO)-C6-C10			1000	740.6		mg/Kg		74	70 - 130		
Diesel Range Organics (Over C10-C28)			1000	850.1		mg/Kg		85	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1-Chlorooctane	*94*		*70 - 130*
o-Terphenyl	*75*		*70 - 130*

Lab Sample ID: LCSD 880-3560/3-A
Matrix: Solid
Analysis Batch: 3614

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 3560

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			1000	806.3		mg/Kg		81	70 - 130	8	20
Diesel Range Organics (Over C10-C28)			1000	810.2		mg/Kg		81	70 - 130	5	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1-Chlorooctane	*92*		*70 - 130*
o-Terphenyl	*72*		*70 - 130*

Lab Sample ID: 820-779-1 MS
Matrix: Solid
Analysis Batch: 3614

Client Sample ID: GP-1 (4-5)
Prep Type: Total/NA
Prep Batch: 3560

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	996	921.9		mg/Kg		93	70 - 130		
Diesel Range Organics (Over C10-C28)	<49.9	U	996	950.8		mg/Kg		95	70 - 130		

QC Sample Results

Client: Terracon Consulting Eng & Scientists
Project/Site: Aikman SWD

Job ID: 820-779-1

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

Lab Sample ID: 820-779-1 MS
Matrix: Solid
Analysis Batch: 3614

Client Sample ID: GP-1 (4-5)
Prep Type: Total/NA
Prep Batch: 3560

Surrogate	MS %Recovery	MS Qualifier	Limits
1-Chlorooctane	94		70 - 130
o-Terphenyl	73		70 - 130

Lab Sample ID: 820-779-1 MSD
Matrix: Solid
Analysis Batch: 3614

Client Sample ID: GP-1 (4-5)
Prep Type: Total/NA
Prep Batch: 3560

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	996	974.4		mg/Kg		98	70 - 130	6	20
Diesel Range Organics (Over C10-C28)	<49.9	U	996	959.9		mg/Kg		96	70 - 130	1	20

Surrogate	MSD %Recovery	MSD Qualifier	Limits
1-Chlorooctane	94		70 - 130
o-Terphenyl	72		70 - 130

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-3463/1-A
Matrix: Solid
Analysis Batch: 3470

Client Sample ID: Method Blank
Prep Type: Soluble

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00	U	5.00		mg/Kg			05/25/21 15:16	1

Lab Sample ID: LCS 880-3463/2-A
Matrix: Solid
Analysis Batch: 3470

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	250	244.4		mg/Kg		98	90 - 110

Lab Sample ID: LCSD 880-3463/3-A
Matrix: Solid
Analysis Batch: 3470

Client Sample ID: Lab Control Sample Dup
Prep Type: Soluble

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	250	244.8		mg/Kg		98	90 - 110	0	20

QC Association Summary

Client: Terracon Consulting Eng & Scientists
Project/Site: Aikman SWD

Job ID: 820-779-1

GC Semi VOA

Prep Batch: 3560

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
820-779-1	GP-1 (4-5)	Total/NA	Solid	8015NM Prep	
820-779-2	GP-1 (5-6)	Total/NA	Solid	8015NM Prep	
820-779-3	GP-1 (6-7)	Total/NA	Solid	8015NM Prep	
820-779-4	GP-1 (7-8)	Total/NA	Solid	8015NM Prep	
820-779-5	GP-1 (8-9)	Total/NA	Solid	8015NM Prep	
820-779-6	GP-1 (9-10)	Total/NA	Solid	8015NM Prep	
820-779-7	GP-1 (10-11)	Total/NA	Solid	8015NM Prep	
820-779-8	GP-1 (11-12)	Total/NA	Solid	8015NM Prep	
820-779-9	GP-2 (0-1)	Total/NA	Solid	8015NM Prep	
820-779-10	GP-2 (1-2)	Total/NA	Solid	8015NM Prep	
820-779-11	GP-2 (2-3)	Total/NA	Solid	8015NM Prep	
820-779-12	GP-2 (3-4)	Total/NA	Solid	8015NM Prep	
820-779-13	GP-2 (4-5)	Total/NA	Solid	8015NM Prep	
820-779-14	GP-2 (5-6)	Total/NA	Solid	8015NM Prep	
820-779-15	GP-2 (6-7)	Total/NA	Solid	8015NM Prep	
820-779-16	GP-2 (7-8)	Total/NA	Solid	8015NM Prep	
820-779-17	GP-2 (8-9)	Total/NA	Solid	8015NM Prep	
820-779-18	GP-2 (9-10)	Total/NA	Solid	8015NM Prep	
820-779-19	GP-2 (10-11)	Total/NA	Solid	8015NM Prep	
820-779-20	GP-2 (11-12)	Total/NA	Solid	8015NM Prep	
MB 880-3560/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-3560/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-3560/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
820-779-1 MS	GP-1 (4-5)	Total/NA	Solid	8015NM Prep	
820-779-1 MSD	GP-1 (4-5)	Total/NA	Solid	8015NM Prep	

Analysis Batch: 3614

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
820-779-1	GP-1 (4-5)	Total/NA	Solid	8015B NM	3560
820-779-2	GP-1 (5-6)	Total/NA	Solid	8015B NM	3560
820-779-3	GP-1 (6-7)	Total/NA	Solid	8015B NM	3560
820-779-4	GP-1 (7-8)	Total/NA	Solid	8015B NM	3560
820-779-5	GP-1 (8-9)	Total/NA	Solid	8015B NM	3560
820-779-6	GP-1 (9-10)	Total/NA	Solid	8015B NM	3560
820-779-7	GP-1 (10-11)	Total/NA	Solid	8015B NM	3560
820-779-8	GP-1 (11-12)	Total/NA	Solid	8015B NM	3560
820-779-9	GP-2 (0-1)	Total/NA	Solid	8015B NM	3560
820-779-10	GP-2 (1-2)	Total/NA	Solid	8015B NM	3560
820-779-11	GP-2 (2-3)	Total/NA	Solid	8015B NM	3560
820-779-12	GP-2 (3-4)	Total/NA	Solid	8015B NM	3560
820-779-13	GP-2 (4-5)	Total/NA	Solid	8015B NM	3560
820-779-14	GP-2 (5-6)	Total/NA	Solid	8015B NM	3560
820-779-15	GP-2 (6-7)	Total/NA	Solid	8015B NM	3560
820-779-16	GP-2 (7-8)	Total/NA	Solid	8015B NM	3560
820-779-17	GP-2 (8-9)	Total/NA	Solid	8015B NM	3560
820-779-18	GP-2 (9-10)	Total/NA	Solid	8015B NM	3560
820-779-19	GP-2 (10-11)	Total/NA	Solid	8015B NM	3560
820-779-20	GP-2 (11-12)	Total/NA	Solid	8015B NM	3560
MB 880-3560/1-A	Method Blank	Total/NA	Solid	8015B NM	3560
LCS 880-3560/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	3560
LCSD 880-3560/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	3560

QC Association Summary

Client: Terracon Consulting Eng & Scientists
Project/Site: Aikman SWD

Job ID: 820-779-1

GC Semi VOA (Continued)

Analysis Batch: 3614 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
820-779-1 MS	GP-1 (4-5)	Total/NA	Solid	8015B NM	3560
820-779-1 MSD	GP-1 (4-5)	Total/NA	Solid	8015B NM	3560

HPLC/IC

Leach Batch: 3463

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
820-779-1	GP-1 (4-5)	Soluble	Solid	DI Leach	
820-779-2	GP-1 (5-6)	Soluble	Solid	DI Leach	
820-779-3	GP-1 (6-7)	Soluble	Solid	DI Leach	
820-779-4	GP-1 (7-8)	Soluble	Solid	DI Leach	
820-779-5	GP-1 (8-9)	Soluble	Solid	DI Leach	
820-779-6	GP-1 (9-10)	Soluble	Solid	DI Leach	
820-779-7	GP-1 (10-11)	Soluble	Solid	DI Leach	
820-779-8	GP-1 (11-12)	Soluble	Solid	DI Leach	
820-779-9	GP-2 (0-1)	Soluble	Solid	DI Leach	
820-779-10	GP-2 (1-2)	Soluble	Solid	DI Leach	
820-779-11	GP-2 (2-3)	Soluble	Solid	DI Leach	
820-779-12	GP-2 (3-4)	Soluble	Solid	DI Leach	
820-779-13	GP-2 (4-5)	Soluble	Solid	DI Leach	
820-779-14	GP-2 (5-6)	Soluble	Solid	DI Leach	
820-779-15	GP-2 (6-7)	Soluble	Solid	DI Leach	
820-779-16	GP-2 (7-8)	Soluble	Solid	DI Leach	
820-779-17	GP-2 (8-9)	Soluble	Solid	DI Leach	
820-779-18	GP-2 (9-10)	Soluble	Solid	DI Leach	
820-779-19	GP-2 (10-11)	Soluble	Solid	DI Leach	
820-779-20	GP-2 (11-12)	Soluble	Solid	DI Leach	
MB 880-3463/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-3463/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-3463/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
820-779-1 MS	GP-1 (4-5)	Soluble	Solid	DI Leach	
820-779-1 MSD	GP-1 (4-5)	Soluble	Solid	DI Leach	
820-779-11 MS	GP-2 (2-3)	Soluble	Solid	DI Leach	
820-779-11 MSD	GP-2 (2-3)	Soluble	Solid	DI Leach	

Analysis Batch: 3470

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
820-779-1	GP-1 (4-5)	Soluble	Solid	300.0	3463
820-779-2	GP-1 (5-6)	Soluble	Solid	300.0	3463
820-779-3	GP-1 (6-7)	Soluble	Solid	300.0	3463
820-779-4	GP-1 (7-8)	Soluble	Solid	300.0	3463
820-779-5	GP-1 (8-9)	Soluble	Solid	300.0	3463
820-779-6	GP-1 (9-10)	Soluble	Solid	300.0	3463
820-779-7	GP-1 (10-11)	Soluble	Solid	300.0	3463
820-779-8	GP-1 (11-12)	Soluble	Solid	300.0	3463
820-779-9	GP-2 (0-1)	Soluble	Solid	300.0	3463
820-779-10	GP-2 (1-2)	Soluble	Solid	300.0	3463
820-779-11	GP-2 (2-3)	Soluble	Solid	300.0	3463
820-779-12	GP-2 (3-4)	Soluble	Solid	300.0	3463
820-779-13	GP-2 (4-5)	Soluble	Solid	300.0	3463
820-779-14	GP-2 (5-6)	Soluble	Solid	300.0	3463

QC Association Summary

Client: Terracon Consulting Eng & Scientists
Project/Site: Aikman SWD

Job ID: 820-779-1

HPLC/IC (Continued)

Analysis Batch: 3470 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
820-779-15	GP-2 (6-7)	Soluble	Solid	300.0	3463
820-779-16	GP-2 (7-8)	Soluble	Solid	300.0	3463
820-779-17	GP-2 (8-9)	Soluble	Solid	300.0	3463
820-779-18	GP-2 (9-10)	Soluble	Solid	300.0	3463
820-779-19	GP-2 (10-11)	Soluble	Solid	300.0	3463
820-779-20	GP-2 (11-12)	Soluble	Solid	300.0	3463
MB 880-3463/1-A	Method Blank	Soluble	Solid	300.0	3463
LCS 880-3463/2-A	Lab Control Sample	Soluble	Solid	300.0	3463
LCSD 880-3463/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	3463
820-779-1 MS	GP-1 (4-5)	Soluble	Solid	300.0	3463
820-779-1 MSD	GP-1 (4-5)	Soluble	Solid	300.0	3463
820-779-11 MS	GP-2 (2-3)	Soluble	Solid	300.0	3463
820-779-11 MSD	GP-2 (2-3)	Soluble	Solid	300.0	3463

Lab Chronicle

Client: Terracon Consulting Eng & Scientists
Project/Site: Aikman SWD

Job ID: 820-779-1

Client Sample ID: GP-1 (4-5)
Date Collected: 05/21/21 11:35
Date Received: 05/24/21 16:25

Lab Sample ID: 820-779-1
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	3560	05/27/21 09:15	DM	XEN MID
Total/NA	Analysis	8015B NM		1			3614	05/28/21 15:56	AM	XEN MID
Soluble	Leach	DI Leach			4.95 g	50 mL	3463	05/25/21 11:46	CH	XEN MID
Soluble	Analysis	300.0		1			3470	05/25/21 15:32	SC	XEN MID

Client Sample ID: GP-1 (5-6)
Date Collected: 05/21/21 11:37
Date Received: 05/24/21 16:25

Lab Sample ID: 820-779-2
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8015NM Prep			10.05 g	10 mL	3560	05/27/21 09:15	DM	XEN MID
Total/NA	Analysis	8015B NM		1			3614	05/28/21 17:00	AM	XEN MID
Soluble	Leach	DI Leach			4.98 g	50 mL	3463	05/25/21 11:46	CH	XEN MID
Soluble	Analysis	300.0		1			3470	05/25/21 15:47	SC	XEN MID

Client Sample ID: GP-1 (6-7)
Date Collected: 05/21/21 11:39
Date Received: 05/24/21 16:25

Lab Sample ID: 820-779-3
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8015NM Prep			10.05 g	10 mL	3560	05/27/21 09:15	DM	XEN MID
Total/NA	Analysis	8015B NM		1			3614	05/28/21 17:21	AM	XEN MID
Soluble	Leach	DI Leach			4.97 g	50 mL	3463	05/25/21 11:46	CH	XEN MID
Soluble	Analysis	300.0		1			3470	05/25/21 15:52	SC	XEN MID

Client Sample ID: GP-1 (7-8)
Date Collected: 05/21/21 11:41
Date Received: 05/24/21 16:25

Lab Sample ID: 820-779-4
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	3560	05/27/21 09:15	DM	XEN MID
Total/NA	Analysis	8015B NM		1			3614	05/28/21 17:43	AM	XEN MID
Soluble	Leach	DI Leach			4.99 g	50 mL	3463	05/25/21 11:46	CH	XEN MID
Soluble	Analysis	300.0		1			3470	05/25/21 15:57	SC	XEN MID

Client Sample ID: GP-1 (8-9)
Date Collected: 05/21/21 11:43
Date Received: 05/24/21 16:25

Lab Sample ID: 820-779-5
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8015NM Prep			10.05 g	10 mL	3560	05/27/21 09:15	DM	XEN MID
Total/NA	Analysis	8015B NM		1			3614	05/28/21 18:04	AM	XEN MID
Soluble	Leach	DI Leach			5.01 g	50 mL	3463	05/25/21 11:46	CH	XEN MID
Soluble	Analysis	300.0		1			3470	05/25/21 16:03	SC	XEN MID

Lab Chronicle

Client: Terracon Consulting Eng & Scientists
Project/Site: Aikman SWD

Job ID: 820-779-1

Client Sample ID: GP-1 (9-10)
Date Collected: 05/21/21 11:45
Date Received: 05/24/21 16:25

Lab Sample ID: 820-779-6
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	3560	05/27/21 09:15	DM	XEN MID
Total/NA	Analysis	8015B NM		1			3614	05/28/21 18:26	AM	XEN MID
Soluble	Leach	DI Leach			5.01 g	50 mL	3463	05/25/21 11:46	CH	XEN MID
Soluble	Analysis	300.0		1			3470	05/25/21 16:18	SC	XEN MID

Client Sample ID: GP-1 (10-11)
Date Collected: 05/21/21 11:47
Date Received: 05/24/21 16:25

Lab Sample ID: 820-779-7
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	3560	05/27/21 09:15	DM	XEN MID
Total/NA	Analysis	8015B NM		1			3614	05/28/21 18:47	AM	XEN MID
Soluble	Leach	DI Leach			5.04 g	50 mL	3463	05/25/21 11:46	CH	XEN MID
Soluble	Analysis	300.0		1			3470	05/25/21 16:38	SC	XEN MID

Client Sample ID: GP-1 (11-12)
Date Collected: 05/21/21 11:49
Date Received: 05/24/21 16:25

Lab Sample ID: 820-779-8
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	3560	05/27/21 09:15	DM	XEN MID
Total/NA	Analysis	8015B NM		1			3614	05/28/21 19:08	AM	XEN MID
Soluble	Leach	DI Leach			5.03 g	50 mL	3463	05/25/21 11:46	CH	XEN MID
Soluble	Analysis	300.0		1			3470	05/25/21 16:43	SC	XEN MID

Client Sample ID: GP-2 (0-1)
Date Collected: 05/21/21 12:00
Date Received: 05/24/21 16:25

Lab Sample ID: 820-779-9
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	3560	05/27/21 09:15	DM	XEN MID
Total/NA	Analysis	8015B NM		1			3614	05/28/21 19:30	AM	XEN MID
Soluble	Leach	DI Leach			5.00 g	50 mL	3463	05/25/21 11:46	CH	XEN MID
Soluble	Analysis	300.0		10			3470	05/25/21 16:49	SC	XEN MID

Client Sample ID: GP-2 (1-2)
Date Collected: 05/21/21 12:02
Date Received: 05/24/21 16:25

Lab Sample ID: 820-779-10
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8015NM Prep			10.00 g	10 mL	3560	05/27/21 09:15	DM	XEN MID
Total/NA	Analysis	8015B NM		1			3614	05/28/21 19:51	AM	XEN MID
Soluble	Leach	DI Leach			5.00 g	50 mL	3463	05/25/21 11:46	CH	XEN MID
Soluble	Analysis	300.0		1			3470	05/25/21 16:54	SC	XEN MID

Lab Chronicle

Client: Terracon Consulting Eng & Scientists
Project/Site: Aikman SWD

Job ID: 820-779-1

Client Sample ID: GP-2 (2-3)
Date Collected: 05/21/21 12:04
Date Received: 05/24/21 16:25

Lab Sample ID: 820-779-11
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8015NM Prep			10.04 g	10 mL	3560	05/27/21 09:15	DM	XEN MID
Total/NA	Analysis	8015B NM		1			3614	05/28/21 20:33	AM	XEN MID
Soluble	Leach	DI Leach			5.05 g	50 mL	3463	05/25/21 11:46	CH	XEN MID
Soluble	Analysis	300.0		1			3470	05/25/21 16:59	SC	XEN MID

Client Sample ID: GP-2 (3-4)
Date Collected: 05/21/21 12:06
Date Received: 05/24/21 16:25

Lab Sample ID: 820-779-12
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	3560	05/27/21 09:15	DM	XEN MID
Total/NA	Analysis	8015B NM		1			3614	05/28/21 20:54	AM	XEN MID
Soluble	Leach	DI Leach			4.98 g	50 mL	3463	05/25/21 11:46	CH	XEN MID
Soluble	Analysis	300.0		1			3470	05/25/21 17:15	SC	XEN MID

Client Sample ID: GP-2 (4-5)
Date Collected: 05/21/21 12:08
Date Received: 05/24/21 16:25

Lab Sample ID: 820-779-13
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	3560	05/27/21 09:15	DM	XEN MID
Total/NA	Analysis	8015B NM		1			3614	05/28/21 21:16	AM	XEN MID
Soluble	Leach	DI Leach			4.95 g	50 mL	3463	05/25/21 11:46	CH	XEN MID
Soluble	Analysis	300.0		1			3470	05/25/21 17:20	SC	XEN MID

Client Sample ID: GP-2 (5-6)
Date Collected: 05/21/21 12:10
Date Received: 05/24/21 16:25

Lab Sample ID: 820-779-14
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	3560	05/27/21 09:15	DM	XEN MID
Total/NA	Analysis	8015B NM		1			3614	05/28/21 21:37	AM	XEN MID
Soluble	Leach	DI Leach			4.96 g	50 mL	3463	05/25/21 11:46	CH	XEN MID
Soluble	Analysis	300.0		1			3470	05/25/21 17:35	SC	XEN MID

Client Sample ID: GP-2 (6-7)
Date Collected: 05/21/21 12:12
Date Received: 05/24/21 16:25

Lab Sample ID: 820-779-15
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	3560	05/27/21 09:15	DM	XEN MID
Total/NA	Analysis	8015B NM		1			3614	05/28/21 21:58	AM	XEN MID
Soluble	Leach	DI Leach			4.96 g	50 mL	3463	05/25/21 11:46	CH	XEN MID
Soluble	Analysis	300.0		1			3470	05/25/21 17:40	SC	XEN MID

Lab Chronicle

Client: Terracon Consulting Eng & Scientists
Project/Site: Aikman SWD

Job ID: 820-779-1

Client Sample ID: GP-2 (7-8)
Date Collected: 05/21/21 12:14
Date Received: 05/24/21 16:25

Lab Sample ID: 820-779-16
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8015NM Prep			10.00 g	10 mL	3560	05/27/21 09:15	DM	XEN MID
Total/NA	Analysis	8015B NM		1			3614	05/28/21 22:20	AM	XEN MID
Soluble	Leach	DI Leach			5.03 g	50 mL	3463	05/25/21 11:46	CH	XEN MID
Soluble	Analysis	300.0		1			3470	05/25/21 17:45	SC	XEN MID

Client Sample ID: GP-2 (8-9)
Date Collected: 05/21/21 12:16
Date Received: 05/24/21 16:25

Lab Sample ID: 820-779-17
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	3560	05/27/21 09:15	DM	XEN MID
Total/NA	Analysis	8015B NM		1			3614	05/28/21 22:41	AM	XEN MID
Soluble	Leach	DI Leach			5.04 g	50 mL	3463	05/25/21 11:46	CH	XEN MID
Soluble	Analysis	300.0		1			3470	05/25/21 17:51	SC	XEN MID

Client Sample ID: GP-2 (9-10)
Date Collected: 05/21/21 12:18
Date Received: 05/24/21 16:25

Lab Sample ID: 820-779-18
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	3560	05/27/21 09:15	DM	XEN MID
Total/NA	Analysis	8015B NM		1			3614	05/28/21 23:02	AM	XEN MID
Soluble	Leach	DI Leach			5.03 g	50 mL	3463	05/25/21 11:46	CH	XEN MID
Soluble	Analysis	300.0		1			3470	05/25/21 17:56	SC	XEN MID

Client Sample ID: GP-2 (10-11)
Date Collected: 05/21/21 12:20
Date Received: 05/24/21 16:25

Lab Sample ID: 820-779-19
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	3560	05/27/21 09:15	DM	XEN MID
Total/NA	Analysis	8015B NM		1			3614	05/28/21 23:24	AM	XEN MID
Soluble	Leach	DI Leach			5.02 g	50 mL	3463	05/25/21 11:46	CH	XEN MID
Soluble	Analysis	300.0		1			3470	05/25/21 18:01	SC	XEN MID

Client Sample ID: GP-2 (11-12)
Date Collected: 05/21/21 12:22
Date Received: 05/24/21 16:25

Lab Sample ID: 820-779-20
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	3560	05/27/21 09:15	DM	XEN MID
Total/NA	Analysis	8015B NM		1			3614	05/28/21 23:45	AM	XEN MID
Soluble	Leach	DI Leach			5.00 g	50 mL	3463	05/25/21 11:46	CH	XEN MID
Soluble	Analysis	300.0		1			3470	05/25/21 18:06	SC	XEN MID

Lab Chronicle

Client: Terracon Consulting Eng & Scientists
Project/Site: Aikman SWD

Job ID: 820-779-1

Laboratory References:

XEN MID = Eurofins Xenco, Midland, 1211 W. Florida Ave, Midland, TX 79701, TEL (432)704-5440

Accreditation/Certification Summary

Client: Terracon Consulting Eng & Scientists Job ID: 820-779-1
Project/Site: Aikman SWD

Laboratory: Eurofins Xenco, Midland

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
Texas	NELAP	T104704400-20-21	06-30-21

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
300.0		Solid	Chloride
8015B NM	8015NM Prep	Solid	Diesel Range Organics (Over C10-C28)
8015B NM	8015NM Prep	Solid	Gasoline Range Organics (GRO)-C6-C10
8015B NM	8015NM Prep	Solid	Oil Range Organics (Over C28-C36)
8015B NM	8015NM Prep	Solid	Total TPH

Method Summary

Client: Terracon Consulting Eng & Scientists
Project/Site: Aikman SWD

Job ID: 820-779-1

Method	Method Description	Protocol	Laboratory
8015B NM	Diesel Range Organics (DRO) (GC)	SW846	XEN MID
300.0	Anions, Ion Chromatography	MCAWW	XEN MID
8015NM Prep	Microextraction	SW846	XEN MID
DI Leach	Deionized Water Leaching Procedure	ASTM	XEN MID

Protocol References:

ASTM = ASTM International

MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions.

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

XEN MID = Eurofins Xenco, Midland, 1211 W. Florida Ave, Midland, TX 79701, TEL (432)704-5440

Sample Summary

Client: Terracon Consulting Eng & Scientists
Project/Site: Aikman SWD

Job ID: 820-779-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
820-779-1	GP-1 (4-5)	Solid	05/21/21 11:35	05/24/21 16:25	4 - 5
820-779-2	GP-1 (5-6)	Solid	05/21/21 11:37	05/24/21 16:25	5 - 6
820-779-3	GP-1 (6-7)	Solid	05/21/21 11:39	05/24/21 16:25	6 - 7
820-779-4	GP-1 (7-8)	Solid	05/21/21 11:41	05/24/21 16:25	7 - 8
820-779-5	GP-1 (8-9)	Solid	05/21/21 11:43	05/24/21 16:25	8 - 9
820-779-6	GP-1 (9-10)	Solid	05/21/21 11:45	05/24/21 16:25	9 - 10
820-779-7	GP-1 (10-11)	Solid	05/21/21 11:47	05/24/21 16:25	10 - 11
820-779-8	GP-1 (11-12)	Solid	05/21/21 11:49	05/24/21 16:25	11 - 12
820-779-9	GP-2 (0-1)	Solid	05/21/21 12:00	05/24/21 16:25	0 - 1
820-779-10	GP-2 (1-2)	Solid	05/21/21 12:02	05/24/21 16:25	1 - 2
820-779-11	GP-2 (2-3)	Solid	05/21/21 12:04	05/24/21 16:25	2 - 3
820-779-12	GP-2 (3-4)	Solid	05/21/21 12:06	05/24/21 16:25	3 - 4
820-779-13	GP-2 (4-5)	Solid	05/21/21 12:08	05/24/21 16:25	4 - 5
820-779-14	GP-2 (5-6)	Solid	05/21/21 12:10	05/24/21 16:25	5 - 6
820-779-15	GP-2 (6-7)	Solid	05/21/21 12:12	05/24/21 16:25	6 - 7
820-779-16	GP-2 (7-8)	Solid	05/21/21 12:14	05/24/21 16:25	7 - 8
820-779-17	GP-2 (8-9)	Solid	05/21/21 12:16	05/24/21 16:25	8 - 9
820-779-18	GP-2 (9-10)	Solid	05/21/21 12:18	05/24/21 16:25	9 - 10
820-779-19	GP-2 (10-11)	Solid	05/21/21 12:20	05/24/21 16:25	10 - 11
820-779-20	GP-2 (11-12)	Solid	05/21/21 12:22	05/24/21 16:25	11 - 12

Released to Imaging: 8/29/2023 1:29:02 PM
Received by OCD: 4/10/2023 1:07:45 PM

CHAIN OF CUSTODY RECORD

Terracon

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

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

ANALYSIS REQUESTED

LAB USE ONLY
DUE DATE:
TEMP OF COOLER WHEN RECEIVED (°C): -9.1 / -9.14

Page 1 of 1

Project Number: AR207018
Project Name: Aikman SWD

Matrix	Date	Time	Comp	Grab	Identifying Marks of Sample(s)	Start Depth	End Depth	No. Type of Containers: 4 oz Glass	40 ml VOA	250 ml Poly	5035 kit	Chloride (EPA Method 300)	BTEX (EPA Method 8021B)	TPH Extended 8015	Lab Sample ID
S	5/21/2021	11:35		X	GP-1 (4-5)	4'	5'	X				X			
S	5/21/2021	11:37		X	GP-1 (5-6)	5'	6'	X				X			
S	5/21/2021	11:39		X	GP-1 (6-7)	6'	7'	X				X			
S	5/21/2021	11:41		X	GP-1 (7-8)	7'	8'	X				X			
S	5/21/2021	11:43		X	GP-1 (8-9)	8'	9'	X				X			
S	5/21/2021	11:45		X	GP-1 (9-10)	9'	10'	X				X			
S	5/21/2021	11:47		X	GP-1 (10-11)	10'	11'	X				X			
S	5/21/2021	11:49		X	GP-1 (11-12)	11'	12'	X				X			
S	5/21/2021	12:00		X	GP-2 (0-1)	0'	1'	X				X			
S	5/21/2021	12:02		X	GP-2 (1-2)	1'	2'	X				X			
S	5/21/2021	12:04		X	GP-2 (2-3)	2'	3'	X				X			
S	5/21/2021	12:06		X	GP-2 (3-4)	3'	4'	X				X			
S	5/21/2021	12:08		X	GP-2 (4-5)	4'	5'	X				X			
S	5/21/2021	12:10		X	GP-2 (5-6)	5'	6'	X				X			
S	5/21/2021	12:12		X	GP-2 (6-7)	6'	7'	X				X			
S	5/21/2021	12:14		X	GP-2 (7-8)	7'	8'	X				X			
S	5/21/2021	12:16		X	GP-2 (8-9)	8'	9'	X				X			
S	5/21/2021	12:18		X	GP-2 (9-10)	9'	10'	X				X			
S	5/21/2021	12:20		X	GP-2 (10-11)	10'	11'	X				X			
S	5/21/2021	12:22		X	GP-2 (11-12)	11'	12'	X				X			

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

TRRP Laboratory Review Checklist: ☐ Yes ☐ No

Relinquished by (Signature)	Date	Time	Received by (Signature)	Date	Time
	5-24-21	4:24		5/24/21	16:25
Relinquished by (Signature)	Date	Time	Received by (Signature)	Date	Time
Relinquished by (Signature)	Date	Time	Received by (Signature)	Date	Time
Relinquished by (Signature)	Date	Time	Received by (Signature)	Date	Time

NOTES: Client: Spur Energy Partners

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

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

820-779 Chain of Custody

Loc: 820
779

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Eurofins Xenco, Lubbock
6701 Aberdeen Ave Suite 8
Lubbock, TX 79424
Phone 806-794-1296

Chain of Custody Record

eurofins | Environment Testing America

Client Information (Sub Contract Lab)	Sampler	Lab PM: Kramer Jessica	Carrier Tracking No(s):	COC No: 820-1097 1
Client Contact: Shipping/Receiving	Phone	E-Mail: jessica.kramer@eurofinset.com	State of Origin: Texas	Page: Page 1 of 3
Company: Eurofins Xenco		Accreditations Required (See note): NELAP - Texas		Job #: 820-779-1
Address: 1211 W Florida Ave,	Due Date Requested: 5/25/2021			
City: Midland	TAT Requested (days):			
State, Zip: TX 79701				
Phone: 432-704-5440(Tel)	PO #:			
Email	WO #:			
Project Name: AR207018 Aikman SWD	Project #: 82000340			
Site:	SSOW#:			

Analysis Requested

Preservation Codes.

A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E NaHSO4, F - MeOH, G - Amchlor, H Ascorbic Acid, I - Ice, J DI Water, K - EDTA, L EDA, M - Hexane, N None, O - AsNaO2, P Na2O4S, Q - Na2SO3, R Na2S2O3, S H2SO4, T TSP Dodecahydrate, U Acetone, V - MCAA, W pH 4-5, Z - other (specify)

Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	300_ORGFM_28D/DI_LEACH Chloride	Total Number of containers	Special Instructions/Note:
			Preservation Code:						
GP-1(4-5) (820-779-1)	5/21/21	11 35 Central		Solid			X	1	
GP-1(5-6) (820-779-2)	5/21/21	11 37 Central		Solid			X	1	
GP-1(6-7) (820-779-3)	5/21/21	11 39 Central		Solid			X	1	
GP-1(7-8) (820-779-4)	5/21/21	11 41 Central		Solid			X	1	
GP-1(8-9) (820-779-5)	5/21/21	11 43 Central		Solid			X	1	
GP-1(9-10) (820-779-6)	5/21/21	11 45 Central		Solid			X	1	
GP-1(10-11) (820-779-7)	5/21/21	11 47 Central		Solid			X	1	
GP-1(11-12) (820-779-8)	5/21/21	11 49 Central		Solid			X	1	
GP-2(0-1) (820-779-9)	5/21/21	12:00 Central		Solid			X	1	

Note Since laboratory accreditations are subject to change, Eurofins Xenco LLC places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the Eurofins Xenco LLC laboratory or other instructions will be provided Any changes to accreditation status should be brought to Eurofins Xenco LLC attention immediately If all requested accreditations are current to date, return the signed Chain of Custody attesting to said complicance to Eurofins Xenco LLC.

Possible Hazard Identification: Unconfirmed	Sample Disposal (A fee may be assessed if samples are retained longer than 1 month): ☐ Return To Client ☐ Disposal By Lab ☐ Archive For ____ Months
Deliverable Requested I II III IV, Other (specify) Primary Deliverable Rank 2	Special Instructions/QC Requirements.

Empty Kit Relinquished by	Date	Time.	Method of Shipment:			
Relinquished by:	Date/Time: 5/24/21 17:00	Company	Received by:	Date/Time: 5-25-21 11:30AM	Company	
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company	
Relinquished by:	Date/Time:	Company	Received by:	Date/Time	Company	

Custody Seals Intact: Δ Yes Δ No	Custody Seal No	Cooler Temperature(s) °C and Other Remarks:

Ver: 11/01/2020

Received by OCD: 4/10/2023 1:07:45 PM
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5/31/2021 (Rev. 1)
Released to Imaging: 8/29/2023 1:29:02 PM

Eurofins Xenco, Lubbock
6701 Aberdeen Ave Suite 8
Lubbock, TX 79424
Phone. 806-794-1296

Chain of Custody Record

eurofins | Environment Testing America

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Kramer Jessica	Carrier Tracking No(s):	COC No: 820-1097 2
Client Contact: Shipping/Receiving	Phone:	E-Mail: jessica kramer@eurofinset.com	State of Origin: Texas	Page: Page 2 of 3
Company: Eurofins Xenco		Accreditations Required (See note): NELAP - Texas		Job #: 820-779-1
Address: 1211 W Florida Ave,	Due Date Requested: 5/25/2021			
City: Midland	TAT Requested (days):			
State, Zip: TX, 79701				
Phone: 432-704-5440(Tel)	PO #:			
Email	WO #:			
Project Name: AR207018 Aikman SWD	Project #: 82000340			
Site:	SSOW#:			

Analysis Requested

Preservation Codes

A - HCL	M - Hexane
B NaOH	N None
C - Zn Acetate	O AsNaO2
D - Nitric Acid	P - Na2O4S
E NaHSO4	Q - Na2SO3
F MeOH	R Na2S2O3
G - Amchlor	S H2SO4
H Ascorbic Acid	T TSP Dodecahydrate
I Ice	U - Acetone
J DI Water	V MCAA
K EDTA	W - pH 4-5
L EDA	Z other (specify)

Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	300_ORGFM_28D/DI_LEACH Chloride	Total Number of containers	Special Instructions/Note:
			Preservation Code:						
GP-2(1-2) (820-779-10)	5/21/21	12 02 Central		Solid			X	1	
GP-2(2-3) (820-779-11)	5/21/21	12 04 Central		Solid			X	1	
GP-2(3-4) (820-779-12)	5/21/21	12 06 Central		Solid			X	1	
GP-2(4-5) (820-779-13)	5/21/21	12 08 Central		Solid			X	1	
GP-2(5-6) (820-779-14)	5/21/21	12 10 Central		Solid			X	1	
GP-2(6-7) (820-779-15)	5/21/21	12 12 Central		Solid			X	1	
GP-2(7-8) (820-779-16)	5/21/21	12 14 Central		Solid			X	1	
GP-2(8-9) (820-779-17)	5/21/21	12 16 Central		Solid			X	1	
GP-2(9-10) (820-779-18)	5/21/21	12.18 Central		Solid			X	1	

Note: Since laboratory accreditations are subject to change Eurofins Xenco LLC places the ownership of method analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed the samples must be shipped back to the Eurofins Xenco LLC laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins Xenco LLC attention immediately If all requested accreditations are current to date return the signed Chain of Custody attesting to said complicance to Eurofins Xenco LLC.

Possible Hazard Identification *Unconfirmed*	***Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)*** ☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For* _____ *Months*
Deliverable Requested I II III, IV, Other (specify) Primary Deliverable Rank. 2	Special Instructions/QC Requirements.

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:		
Relinquished by:	Date/Time: 5/24/21 1700	Company	Received by:	Date/Time: 5-25-21 11:30 AM	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.	Cooler Temperature(s) °C and Other Remarks:

Ver: 11/01/2020

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Received by OCD: 4/10/2023 1:07:45 PM
5/31/2021 (Rev. 1)
Page 30 of 32
Released to Imaging: 8/29/2023 1:29:02 PM

Login Sample Receipt Checklist

Client: Terracon Consulting Eng & Scientists Job Number: 820-779-1

Login Number: 779 **List Source: Eurofins Xenco, Lubbock**
List Number: 1
Creator: Lee, Randell

Question	Answer	Comment
The cooler's custody seal, if present, is intact.	N/A	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	

Login Sample Receipt Checklist

Client: Terracon Consulting Eng & Scientists Job Number: 820-779-1

Login Number: 779 **List Source: Eurofins Xenco, Midland**
List Number: 2 **List Creation: 05/25/21 11:24 AM**
Creator: Copeland, Tatiana

Question	Answer	Comment
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

July 05, 2022

JOSEPH GUESNIER

TERRACON CONSULTANTS

5827 50TH ST. SUITE 1

LUBBOCK, TX 79424

RE: AIKMAN SWD

Enclosed are the results of analyses for samples received by the laboratory on 07/01/22 8:38.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-21-14. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (*). For a complete list of accredited analytes and matrices visit the TCEQ website at www.tceq.texas.gov/field/qa/lab_accred_certif.html.

Cardinal Laboratories is accreditated through the State of Colorado Department of Public Health and Environment for:

Method EPA 552.2	Haloacetic Acids (HAA-5)
Method EPA 524.2	Total Trihalomethanes (TTHM)
Method EPA 524.4	Regulated VOCs (V1, V2, V3)

Accreditation applies to public drinking water matrices.

This report meets NELAP requirements and is made up of a cover page, analytical results, and a copy of the original chain-of-custody. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Celey D. Keene

Lab Director/Quality Manager

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

TERRACON CONSULTANTS
JOSEPH GUESNIER
5827 50TH ST. SUITE 1
LUBBOCK TX, 79424
Fax To:

Received:	07/01/2022	Sampling Date:	06/29/2022
Reported:	07/05/2022	Sampling Type:	Soil
Project Name:	AIKMAN SWD	Sampling Condition:	Cool & Intact
Project Number:	AR207018	Sample Received By:	Shalyn Rodriguez
Project Location:	SPUR ENERGY		

Sample ID: CS - 1 (5-6') (H222825-01)

BTEX 8021B mg/kg Analyzed By: JH

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	07/01/2022	ND	2.11	105	2.00	3.89	
Toluene*	<0.050	0.050	07/01/2022	ND	2.12	106	2.00	2.38	
Ethylbenzene*	<0.050	0.050	07/01/2022	ND	2.11	106	2.00	3.23	
Total Xylenes*	<0.150	0.150	07/01/2022	ND	6.41	107	6.00	3.32	
Total BTEX	<0.300	0.300	07/01/2022	ND					

Surrogate: 4-Bromofluorobenzene (PID *106 %* *69.9-140*

Chloride, SM4500Cl-B mg/kg Analyzed By: AC

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**592**	16.0	07/01/2022	ND	432	108	400	3.77	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	07/01/2022	ND	221	110	200	3.68	
DRO >C10-C28*	<10.0	10.0	07/01/2022	ND	220	110	200	2.53	
EXT DRO >C28-C36	<10.0	10.0	07/01/2022	ND					

Surrogate: 1-Chlorooctane *73.7 %* *43-149*

Surrogate: 1-Chlorooctadecane *87.1 %* *42.5-161*

Cardinal Laboratories *=Accredited Analyte

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Celey D. Keene

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

TERRACON CONSULTANTS
JOSEPH GUESNIER
5827 50TH ST. SUITE 1
LUBBOCK TX, 79424
Fax To:

Received:	07/01/2022	Sampling Date:	06/29/2022
Reported:	07/05/2022	Sampling Type:	Soil
Project Name:	AIKMAN SWD	Sampling Condition:	Cool & Intact
Project Number:	AR207018	Sample Received By:	Shalyn Rodriguez
Project Location:	SPUR ENERGY		

Sample ID: CS - 2 (5-6') (H222825-02)

BTEX 8021B mg/kg Analyzed By: JH

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	07/01/2022	ND	2.11	105	2.00	3.89	
Toluene*	<0.050	0.050	07/01/2022	ND	2.12	106	2.00	2.38	
Ethylbenzene*	<0.050	0.050	07/01/2022	ND	2.11	106	2.00	3.23	
Total Xylenes*	<0.150	0.150	07/01/2022	ND	6.41	107	6.00	3.32	
Total BTEX	<0.300	0.300	07/01/2022	ND					

Surrogate: 4-Bromofluorobenzene (PID *107 %* *69.9-140*

Chloride, SM4500Cl-B mg/kg Analyzed By: AC

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**384**	16.0	07/01/2022	ND	432	108	400	3.77	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	07/01/2022	ND	221	110	200	3.68	
DRO >C10-C28*	<10.0	10.0	07/01/2022	ND	220	110	200	2.53	
EXT DRO >C28-C36	<10.0	10.0	07/01/2022	ND					

Surrogate: 1-Chlorooctane *80.8 %* *43-149*

Surrogate: 1-Chlorooctadecane *94.8 %* *42.5-161*

Cardinal Laboratories *=Accredited Analyte

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of the services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.

Celey D. Keene

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

TERRACON CONSULTANTS
JOSEPH GUESNIER
5827 50TH ST. SUITE 1
LUBBOCK TX, 79424
Fax To:

Received:	07/01/2022	Sampling Date:	06/29/2022
Reported:	07/05/2022	Sampling Type:	Soil
Project Name:	AIKMAN SWD	Sampling Condition:	Cool & Intact
Project Number:	AR207018	Sample Received By:	Shalyn Rodriguez
Project Location:	SPUR ENERGY		

Sample ID: CS - 3 (5-6') (H222825-03)

BTEX 8021B mg/kg Analyzed By: JH

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	07/01/2022	ND	2.11	105	2.00	3.89	
Toluene*	<0.050	0.050	07/01/2022	ND	2.12	106	2.00	2.38	
Ethylbenzene*	<0.050	0.050	07/01/2022	ND	2.11	106	2.00	3.23	
Total Xylenes*	<0.150	0.150	07/01/2022	ND	6.41	107	6.00	3.32	
Total BTEX	<0.300	0.300	07/01/2022	ND					

Surrogate: 4-Bromofluorobenzene (PID *107 %* *69.9-140*

Chloride, SM4500Cl-B mg/kg Analyzed By: AC

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**256**	16.0	07/01/2022	ND	432	108	400	3.77	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	07/01/2022	ND	221	110	200	3.68	
DRO >C10-C28*	<10.0	10.0	07/01/2022	ND	220	110	200	2.53	
EXT DRO >C28-C36	<10.0	10.0	07/01/2022	ND					

Surrogate: 1-Chlorooctane *84.4 %* *43-149*

Surrogate: 1-Chlorooctadecane *98.2 %* *42.5-161*

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Celey D. Keene

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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Analytical Results For:

TERRACON CONSULTANTS
JOSEPH GUESNIER
5827 50TH ST. SUITE 1
LUBBOCK TX, 79424
Fax To:

Received:	07/01/2022	Sampling Date:	06/29/2022
Reported:	07/05/2022	Sampling Type:	Soil
Project Name:	AIKMAN SWD	Sampling Condition:	Cool & Intact
Project Number:	AR207018	Sample Received By:	Shalyn Rodriguez
Project Location:	SPUR ENERGY		

Sample ID: CS - 4 (5-6') (H222825-04)

BTEX 8021B mg/kg Analyzed By: JH

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	07/01/2022	ND	2.11	105	2.00	3.89	
Toluene*	<0.050	0.050	07/01/2022	ND	2.12	106	2.00	2.38	
Ethylbenzene*	<0.050	0.050	07/01/2022	ND	2.11	106	2.00	3.23	
Total Xylenes*	<0.150	0.150	07/01/2022	ND	6.41	107	6.00	3.32	
Total BTEX	<0.300	0.300	07/01/2022	ND					

Surrogate: 4-Bromofluorobenzene (PID *107 %* *69.9-140*

Chloride, SM4500Cl-B mg/kg Analyzed By: AC

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**336**	16.0	07/01/2022	ND	432	108	400	3.77	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	07/01/2022	ND	221	110	200	3.68	
DRO >C10-C28*	<10.0	10.0	07/01/2022	ND	220	110	200	2.53	
EXT DRO >C28-C36	<10.0	10.0	07/01/2022	ND					

Surrogate: 1-Chlorooctane *81.9 %* *43-149*

Surrogate: 1-Chlorooctadecane *93.1 %* *42.5-161*

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Analytical Results For:

TERRACON CONSULTANTS
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5827 50TH ST. SUITE 1
LUBBOCK TX, 79424
Fax To:

Received:	07/01/2022	Sampling Date:	06/29/2022
Reported:	07/05/2022	Sampling Type:	Soil
Project Name:	AIKMAN SWD	Sampling Condition:	Cool & Intact
Project Number:	AR207018	Sample Received By:	Shalyn Rodriguez
Project Location:	SPUR ENERGY		

Sample ID: CS - 5 (5-6') (H222825-05)

BTEX 8021B mg/kg Analyzed By: JH

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	07/01/2022	ND	2.11	105	2.00	3.89	
Toluene*	<0.050	0.050	07/01/2022	ND	2.12	106	2.00	2.38	
Ethylbenzene*	<0.050	0.050	07/01/2022	ND	2.11	106	2.00	3.23	
Total Xylenes*	<0.150	0.150	07/01/2022	ND	6.41	107	6.00	3.32	
Total BTEX	<0.300	0.300	07/01/2022	ND					

Surrogate: 4-Bromofluorobenzene (PID *106 %* *69.9-140*

Chloride, SM4500Cl-B mg/kg Analyzed By: AC

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**512**	16.0	07/01/2022	ND	432	108	400	3.77	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	07/01/2022	ND	221	110	200	3.68	
DRO >C10-C28*	<10.0	10.0	07/01/2022	ND	220	110	200	2.53	
EXT DRO >C28-C36	<10.0	10.0	07/01/2022	ND					

Surrogate: 1-Chlorooctane *76.8 %* *43-149*

Surrogate: 1-Chlorooctadecane *91.3 %* *42.5-161*

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Analytical Results For:

TERRACON CONSULTANTS
JOSEPH GUESNIER
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LUBBOCK TX, 79424
Fax To:

Received:	07/01/2022	Sampling Date:	06/29/2022
Reported:	07/05/2022	Sampling Type:	Soil
Project Name:	AIKMAN SWD	Sampling Condition:	Cool & Intact
Project Number:	AR207018	Sample Received By:	Shalyn Rodriguez
Project Location:	SPUR ENERGY		

Sample ID: CS - 6 (5-6') (H222825-06)

BTEX 8021B mg/kg Analyzed By: JH

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	07/01/2022	ND	2.11	105	2.00	3.89	
Toluene*	<0.050	0.050	07/01/2022	ND	2.12	106	2.00	2.38	
Ethylbenzene*	<0.050	0.050	07/01/2022	ND	2.11	106	2.00	3.23	
Total Xylenes*	<0.150	0.150	07/01/2022	ND	6.41	107	6.00	3.32	
Total BTEX	<0.300	0.300	07/01/2022	ND					

Surrogate: 4-Bromofluorobenzene (PID *106 %* *69.9-140*

Chloride, SM4500Cl-B mg/kg Analyzed By: AC

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**352**	16.0	07/01/2022	ND	432	108	400	3.77	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	07/01/2022	ND	190	94.9	200	2.05	
DRO >C10-C28*	<10.0	10.0	07/01/2022	ND	203	102	200	0.966	
EXT DRO >C28-C36	<10.0	10.0	07/01/2022	ND					

Surrogate: 1-Chlorooctane *74.8 %* *43-149*

Surrogate: 1-Chlorooctadecane *88.4 %* *42.5-161*

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Analytical Results For:

TERRACON CONSULTANTS
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LUBBOCK TX, 79424
Fax To:

Received:	07/01/2022	Sampling Date:	06/29/2022
Reported:	07/05/2022	Sampling Type:	Soil
Project Name:	AIKMAN SWD	Sampling Condition:	Cool & Intact
Project Number:	AR207018	Sample Received By:	Shalyn Rodriguez
Project Location:	SPUR ENERGY		

Sample ID: CS - 7 (5-6') (H222825-07)

BTEX 8021B mg/kg Analyzed By: JH

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	07/01/2022	ND	2.11	105	2.00	3.89	
Toluene*	<0.050	0.050	07/01/2022	ND	2.12	106	2.00	2.38	
Ethylbenzene*	<0.050	0.050	07/01/2022	ND	2.11	106	2.00	3.23	
Total Xylenes*	<0.150	0.150	07/01/2022	ND	6.41	107	6.00	3.32	
Total BTEX	<0.300	0.300	07/01/2022	ND					

Surrogate: 4-Bromofluorobenzene (PID *105 %* *69.9-140*

Chloride, SM4500Cl-B mg/kg Analyzed By: AC

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**608**	16.0	07/01/2022	ND	432	108	400	3.77	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	07/01/2022	ND	190	94.9	200	2.05	
DRO >C10-C28*	**69.5**	10.0	07/01/2022	ND	203	102	200	0.966	
EXT DRO >C28-C36	<10.0	10.0	07/01/2022	ND					

Surrogate: 1-Chlorooctane *81.0 %* *43-149*

Surrogate: 1-Chlorooctadecane *99.0 %* *42.5-161*

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Analytical Results For:

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LUBBOCK TX, 79424
Fax To:

Received:	07/01/2022	Sampling Date:	06/29/2022
Reported:	07/05/2022	Sampling Type:	Soil
Project Name:	AIKMAN SWD	Sampling Condition:	Cool & Intact
Project Number:	AR207018	Sample Received By:	Shalyn Rodriguez
Project Location:	SPUR ENERGY		

Sample ID: CS - 8 (5-6') (H222825-08)

BTEX 8021B mg/kg Analyzed By: JH

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	07/01/2022	ND	2.11	105	2.00	3.89	
Toluene*	<0.050	0.050	07/01/2022	ND	2.12	106	2.00	2.38	
Ethylbenzene*	<0.050	0.050	07/01/2022	ND	2.11	106	2.00	3.23	
Total Xylenes*	<0.150	0.150	07/01/2022	ND	6.41	107	6.00	3.32	
Total BTEX	<0.300	0.300	07/01/2022	ND					

Surrogate: 4-Bromofluorobenzene (PID *106 %* *69.9-140*

Chloride, SM4500Cl-B mg/kg Analyzed By: AC

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**608**	16.0	07/01/2022	ND	432	108	400	3.77	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	07/01/2022	ND	190	94.9	200	2.05	
DRO >C10-C28*	<10.0	10.0	07/01/2022	ND	203	102	200	0.966	
EXT DRO >C28-C36	<10.0	10.0	07/01/2022	ND					

Surrogate: 1-Chlorooctane *67.7 %* *43-149*

Surrogate: 1-Chlorooctadecane *79.8 %* *42.5-161*

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Analytical Results For:

TERRACON CONSULTANTS
JOSEPH GUESNIER
5827 50TH ST. SUITE 1
LUBBOCK TX, 79424
Fax To:

Received:	07/01/2022	Sampling Date:	06/29/2022
Reported:	07/05/2022	Sampling Type:	Soil
Project Name:	AIKMAN SWD	Sampling Condition:	Cool & Intact
Project Number:	AR207018	Sample Received By:	Shalyn Rodriguez
Project Location:	SPUR ENERGY		

Sample ID: CS - 9 (5-6') (H222825-09)

BTEX 8021B mg/kg **Analyzed By: JH**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	07/01/2022	ND	2.11	105	2.00	3.89	
Toluene*	<0.050	0.050	07/01/2022	ND	2.12	106	2.00	2.38	
Ethylbenzene*	<0.050	0.050	07/01/2022	ND	2.11	106	2.00	3.23	
Total Xylenes*	<0.150	0.150	07/01/2022	ND	6.41	107	6.00	3.32	
Total BTEX	<0.300	0.300	07/01/2022	ND					

Surrogate: 4-Bromofluorobenzene (PID *105 %* *69.9-140*

Chloride, SM4500Cl-B mg/kg **Analyzed By: AC**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**880**	16.0	07/01/2022	ND	432	108	400	3.77	

TPH 8015M mg/kg **Analyzed By: MS**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	07/01/2022	ND	190	94.9	200	2.05	
DRO >C10-C28*	<10.0	10.0	07/01/2022	ND	203	102	200	0.966	
EXT DRO >C28-C36	<10.0	10.0	07/01/2022	ND					

Surrogate: 1-Chlorooctane *65.4 %* *43-149*

Surrogate: 1-Chlorooctadecane *78.4 %* *42.5-161*

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Analytical Results For:

TERRACON CONSULTANTS
JOSEPH GUESNIER
5827 50TH ST. SUITE 1
LUBBOCK TX, 79424
Fax To:

Received:	07/01/2022	Sampling Date:	06/29/2022
Reported:	07/05/2022	Sampling Type:	Soil
Project Name:	AIKMAN SWD	Sampling Condition:	Cool & Intact
Project Number:	AR207018	Sample Received By:	Shalyn Rodriguez
Project Location:	SPUR ENERGY		

Sample ID: CS - 10 (5-6') (H222825-10)

BTEX 8021B mg/kg Analyzed By: JH

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	07/01/2022	ND	2.11	105	2.00	3.89	
Toluene*	<0.050	0.050	07/01/2022	ND	2.12	106	2.00	2.38	
Ethylbenzene*	<0.050	0.050	07/01/2022	ND	2.11	106	2.00	3.23	
Total Xylenes*	<0.150	0.150	07/01/2022	ND	6.41	107	6.00	3.32	
Total BTEX	<0.300	0.300	07/01/2022	ND					

Surrogate: 4-Bromofluorobenzene (PID *105 %* *69.9-140*

Chloride, SM4500Cl-B mg/kg Analyzed By: AC

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**1310**	16.0	07/01/2022	ND	432	108	400	3.77	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	07/01/2022	ND	190	94.9	200	2.05	
DRO >C10-C28*	<10.0	10.0	07/01/2022	ND	203	102	200	0.966	
EXT DRO >C28-C36	<10.0	10.0	07/01/2022	ND					

Surrogate: 1-Chlorooctane *74.3 %* *43-149*

Surrogate: 1-Chlorooctadecane *87.2 %* *42.5-161*

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Analytical Results For:

TERRACON CONSULTANTS
JOSEPH GUESNIER
5827 50TH ST. SUITE 1
LUBBOCK TX, 79424
Fax To:

Received:	07/01/2022	Sampling Date:	06/29/2022
Reported:	07/05/2022	Sampling Type:	Soil
Project Name:	AIKMAN SWD	Sampling Condition:	Cool & Intact
Project Number:	AR207018	Sample Received By:	Shalyn Rodriguez
Project Location:	SPUR ENERGY		

Sample ID: CS - 11 (5-6') (H222825-11)

BTEX 8021B mg/kg Analyzed By: JH

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	07/01/2022	ND	2.11	105	2.00	3.89	
Toluene*	<0.050	0.050	07/01/2022	ND	2.12	106	2.00	2.38	
Ethylbenzene*	<0.050	0.050	07/01/2022	ND	2.11	106	2.00	3.23	
Total Xylenes*	<0.150	0.150	07/01/2022	ND	6.41	107	6.00	3.32	
Total BTEX	<0.300	0.300	07/01/2022	ND					

Surrogate: 4-Bromofluorobenzene (PID *106 %* *69.9-140*

Chloride, SM4500Cl-B mg/kg Analyzed By: AC

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**560**	16.0	07/01/2022	ND	432	108	400	3.77	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	07/01/2022	ND	190	94.9	200	2.05	
DRO >C10-C28*	<10.0	10.0	07/01/2022	ND	203	102	200	0.966	
EXT DRO >C28-C36	<10.0	10.0	07/01/2022	ND					

Surrogate: 1-Chlorooctane *69.3 %* *43-149*

Surrogate: 1-Chlorooctadecane *78.8 %* *42.5-161*

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Analytical Results For:

TERRACON CONSULTANTS
JOSEPH GUESNIER
5827 50TH ST. SUITE 1
LUBBOCK TX, 79424
Fax To:

Received:	07/01/2022	Sampling Date:	06/29/2022
Reported:	07/05/2022	Sampling Type:	Soil
Project Name:	AIKMAN SWD	Sampling Condition:	Cool & Intact
Project Number:	AR207018	Sample Received By:	Shalyn Rodriguez
Project Location:	SPUR ENERGY		

Sample ID: CS - 12 (5-6') (H222825-12)

BTEX 8021B mg/kg Analyzed By: JH

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	07/01/2022	ND	2.11	105	2.00	3.89	
Toluene*	<0.050	0.050	07/01/2022	ND	2.12	106	2.00	2.38	
Ethylbenzene*	<0.050	0.050	07/01/2022	ND	2.11	106	2.00	3.23	
Total Xylenes*	<0.150	0.150	07/01/2022	ND	6.41	107	6.00	3.32	
Total BTEX	<0.300	0.300	07/01/2022	ND					

Surrogate: 4-Bromofluorobenzene (PID *107 %* *69.9-140*

Chloride, SM4500Cl-B mg/kg Analyzed By: AC

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**288**	16.0	07/01/2022	ND	432	108	400	3.77	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	07/01/2022	ND	190	94.9	200	2.05	
DRO >C10-C28*	<10.0	10.0	07/01/2022	ND	203	102	200	0.966	
EXT DRO >C28-C36	<10.0	10.0	07/01/2022	ND					

Surrogate: 1-Chlorooctane *71.5 %* *43-149*

Surrogate: 1-Chlorooctadecane *82.3 %* *42.5-161*

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Celey D. Keene, Lab Director/Quality Manager

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PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

TERRACON CONSULTANTS
JOSEPH GUESNIER
5827 50TH ST. SUITE 1
LUBBOCK TX, 79424
Fax To:

Received:	07/01/2022	Sampling Date:	06/29/2022
Reported:	07/05/2022	Sampling Type:	Soil
Project Name:	AIKMAN SWD	Sampling Condition:	Cool & Intact
Project Number:	AR207018	Sample Received By:	Shalyn Rodriguez
Project Location:	SPUR ENERGY		

Sample ID: CS - 13 (5-6') (H222825-13)

BTEX 8021B mg/kg Analyzed By: JH

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	07/01/2022	ND	2.11	105	2.00	3.89	
Toluene*	<0.050	0.050	07/01/2022	ND	2.12	106	2.00	2.38	
Ethylbenzene*	<0.050	0.050	07/01/2022	ND	2.11	106	2.00	3.23	
Total Xylenes*	<0.150	0.150	07/01/2022	ND	6.41	107	6.00	3.32	
Total BTEX	<0.300	0.300	07/01/2022	ND					

Surrogate: 4-Bromofluorobenzene (PID *107 %* *69.9-140*

Chloride, SM4500Cl-B mg/kg Analyzed By: AC

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**448**	16.0	07/01/2022	ND	432	108	400	3.77	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	07/01/2022	ND	190	94.9	200	2.05	
DRO >C10-C28*	<10.0	10.0	07/01/2022	ND	203	102	200	0.966	
EXT DRO >C28-C36	<10.0	10.0	07/01/2022	ND					

Surrogate: 1-Chlorooctane *78.0 %* *43-149*

Surrogate: 1-Chlorooctadecane *88.4 %* *42.5-161*

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Analytical Results For:

TERRACON CONSULTANTS
JOSEPH GUESNIER
5827 50TH ST. SUITE 1
LUBBOCK TX, 79424
Fax To:

Received:	07/01/2022	Sampling Date:	06/29/2022
Reported:	07/05/2022	Sampling Type:	Soil
Project Name:	AIKMAN SWD	Sampling Condition:	Cool & Intact
Project Number:	AR207018	Sample Received By:	Shalyn Rodriguez
Project Location:	SPUR ENERGY		

Sample ID: CS - 14 (5-6') (H222825-14)

BTEX 8021B mg/kg **Analyzed By: JH**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	07/01/2022	ND	2.11	105	2.00	3.89	
Toluene*	<0.050	0.050	07/01/2022	ND	2.12	106	2.00	2.38	
Ethylbenzene*	<0.050	0.050	07/01/2022	ND	2.11	106	2.00	3.23	
Total Xylenes*	<0.150	0.150	07/01/2022	ND	6.41	107	6.00	3.32	
Total BTEX	<0.300	0.300	07/01/2022	ND					

Surrogate: 4-Bromofluorobenzene (PID *106 %* *69.9-140*

Chloride, SM4500Cl-B mg/kg **Analyzed By: AC**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**400**	16.0	07/01/2022	ND	432	108	400	3.77	

TPH 8015M mg/kg **Analyzed By: MS**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	07/01/2022	ND	190	94.9	200	2.05	
DRO >C10-C28*	<10.0	10.0	07/01/2022	ND	203	102	200	0.966	
EXT DRO >C28-C36	<10.0	10.0	07/01/2022	ND					

Surrogate: 1-Chlorooctane *79.4 %* *43-149*

Surrogate: 1-Chlorooctadecane *91.0 %* *42.5-161*

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Analytical Results For:

TERRACON CONSULTANTS
JOSEPH GUESNIER
5827 50TH ST. SUITE 1
LUBBOCK TX, 79424
Fax To:

Received:	07/01/2022	Sampling Date:	06/29/2022
Reported:	07/05/2022	Sampling Type:	Soil
Project Name:	AIKMAN SWD	Sampling Condition:	Cool & Intact
Project Number:	AR207018	Sample Received By:	Shalyn Rodriguez
Project Location:	SPUR ENERGY		

Sample ID: CS - 15 (5-6') (H222825-15)

BTEX 8021B mg/kg **Analyzed By: JH**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	07/01/2022	ND	2.11	105	2.00	3.89	
Toluene*	<0.050	0.050	07/01/2022	ND	2.12	106	2.00	2.38	
Ethylbenzene*	<0.050	0.050	07/01/2022	ND	2.11	106	2.00	3.23	
Total Xylenes*	<0.150	0.150	07/01/2022	ND	6.41	107	6.00	3.32	
Total BTEX	<0.300	0.300	07/01/2022	ND					

Surrogate: 4-Bromofluorobenzene (PID *105 %* *69.9-140*

Chloride, SM4500Cl-B mg/kg **Analyzed By: AC**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**464**	16.0	07/01/2022	ND	432	108	400	3.77	

TPH 8015M mg/kg **Analyzed By: MS**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	07/01/2022	ND	190	94.9	200	2.05	
DRO >C10-C28*	<10.0	10.0	07/01/2022	ND	203	102	200	0.966	
EXT DRO >C28-C36	<10.0	10.0	07/01/2022	ND					

Surrogate: 1-Chlorooctane *104 %* *43-149*

Surrogate: 1-Chlorooctadecane *118 %* *42.5-161*

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Analytical Results For:

TERRACON CONSULTANTS
JOSEPH GUESNIER
5827 50TH ST. SUITE 1
LUBBOCK TX, 79424
Fax To:

Received:	07/01/2022	Sampling Date:	06/29/2022
Reported:	07/05/2022	Sampling Type:	Soil
Project Name:	AIKMAN SWD	Sampling Condition:	Cool & Intact
Project Number:	AR207018	Sample Received By:	Shalyn Rodriguez
Project Location:	SPUR ENERGY		

Sample ID: CS - 16 (5-6') (H222825-16)

BTEX 8021B mg/kg **Analyzed By: JH**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	07/01/2022	ND	2.11	105	2.00	3.89	
Toluene*	<0.050	0.050	07/01/2022	ND	2.12	106	2.00	2.38	
Ethylbenzene*	<0.050	0.050	07/01/2022	ND	2.11	106	2.00	3.23	
Total Xylenes*	<0.150	0.150	07/01/2022	ND	6.41	107	6.00	3.32	
Total BTEX	<0.300	0.300	07/01/2022	ND					

Surrogate: 4-Bromofluorobenzene (PID *106 %* *69.9-140*

Chloride, SM4500Cl-B mg/kg **Analyzed By: AC**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**192**	16.0	07/01/2022	ND	416	104	400	3.77	

TPH 8015M mg/kg **Analyzed By: MS**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	07/01/2022	ND	190	94.9	200	2.05	
DRO >C10-C28*	**35.2**	10.0	07/01/2022	ND	203	102	200	0.966	
EXT DRO >C28-C36	<10.0	10.0	07/01/2022	ND					

Surrogate: 1-Chlorooctane *89.4 %* *43-149*

Surrogate: 1-Chlorooctadecane *104 %* *42.5-161*

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Analytical Results For:

TERRACON CONSULTANTS
JOSEPH GUESNIER
5827 50TH ST. SUITE 1
LUBBOCK TX, 79424
Fax To:

Received:	07/01/2022	Sampling Date:	06/29/2022
Reported:	07/05/2022	Sampling Type:	Soil
Project Name:	AIKMAN SWD	Sampling Condition:	Cool & Intact
Project Number:	AR207018	Sample Received By:	Shalyn Rodriguez
Project Location:	SPUR ENERGY		

Sample ID: CS - 17 (5-6') (H222825-17)

BTEX 8021B mg/kg **Analyzed By: JH**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	07/01/2022	ND	2.11	105	2.00	3.89	
Toluene*	<0.050	0.050	07/01/2022	ND	2.12	106	2.00	2.38	
Ethylbenzene*	<0.050	0.050	07/01/2022	ND	2.11	106	2.00	3.23	
Total Xylenes*	<0.150	0.150	07/01/2022	ND	6.41	107	6.00	3.32	
Total BTEX	<0.300	0.300	07/01/2022	ND					

Surrogate: 4-Bromofluorobenzene (PID *105 %* *69.9-140*

Chloride, SM4500Cl-B mg/kg **Analyzed By: AC**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**240**	16.0	07/01/2022	ND	416	104	400	3.77	

TPH 8015M mg/kg **Analyzed By: MS**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	07/01/2022	ND	190	94.9	200	2.05	
DRO >C10-C28*	**59.9**	10.0	07/01/2022	ND	203	102	200	0.966	
EXT DRO >C28-C36	<10.0	10.0	07/01/2022	ND					

Surrogate: 1-Chlorooctane *90.7 %* *43-149*

Surrogate: 1-Chlorooctadecane *107 %* *42.5-161*

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Analytical Results For:

TERRACON CONSULTANTS
JOSEPH GUESNIER
5827 50TH ST. SUITE 1
LUBBOCK TX, 79424
Fax To:

Received:	07/01/2022	Sampling Date:	06/29/2022
Reported:	07/05/2022	Sampling Type:	Soil
Project Name:	AIKMAN SWD	Sampling Condition:	Cool & Intact
Project Number:	AR207018	Sample Received By:	Shalyn Rodriguez
Project Location:	SPUR ENERGY		

Sample ID: CS - 18 (5-6') (H222825-18)

BTEX 8021B mg/kg Analyzed By: JH

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	07/01/2022	ND	2.11	105	2.00	3.89	
Toluene*	<0.050	0.050	07/01/2022	ND	2.12	106	2.00	2.38	
Ethylbenzene*	<0.050	0.050	07/01/2022	ND	2.11	106	2.00	3.23	
Total Xylenes*	<0.150	0.150	07/01/2022	ND	6.41	107	6.00	3.32	
Total BTEX	<0.300	0.300	07/01/2022	ND					

Surrogate: 4-Bromofluorobenzene (PID *106 %* *69.9-140*

Chloride, SM4500Cl-B mg/kg Analyzed By: AC

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**432**	16.0	07/01/2022	ND	416	104	400	3.77	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	07/01/2022	ND	190	94.9	200	2.05	
DRO >C10-C28*	<10.0	10.0	07/01/2022	ND	203	102	200	0.966	
EXT DRO >C28-C36	<10.0	10.0	07/01/2022	ND					

Surrogate: 1-Chlorooctane *87.6 %* *43-149*

Surrogate: 1-Chlorooctadecane *99.6 %* *42.5-161*

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Analytical Results For:

TERRACON CONSULTANTS
JOSEPH GUESNIER
5827 50TH ST. SUITE 1
LUBBOCK TX, 79424
Fax To:

Received:	07/01/2022	Sampling Date:	06/29/2022
Reported:	07/05/2022	Sampling Type:	Soil
Project Name:	AIKMAN SWD	Sampling Condition:	Cool & Intact
Project Number:	AR207018	Sample Received By:	Shalyn Rodriguez
Project Location:	SPUR ENERGY		

Sample ID: CS - 19 (5-6') (H222825-19)

BTEX 8021B mg/kg Analyzed By: JH

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	07/01/2022	ND	2.11	105	2.00	3.89	
Toluene*	<0.050	0.050	07/01/2022	ND	2.12	106	2.00	2.38	
Ethylbenzene*	<0.050	0.050	07/01/2022	ND	2.11	106	2.00	3.23	
Total Xylenes*	<0.150	0.150	07/01/2022	ND	6.41	107	6.00	3.32	
Total BTEX	<0.300	0.300	07/01/2022	ND					

Surrogate: 4-Bromofluorobenzene (PID *105 %* *69.9-140*

Chloride, SM4500Cl-B mg/kg Analyzed By: AC

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**416**	16.0	07/01/2022	ND	416	104	400	3.77	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	07/01/2022	ND	190	94.9	200	2.05	
DRO >C10-C28*	<10.0	10.0	07/01/2022	ND	203	102	200	0.966	
EXT DRO >C28-C36	<10.0	10.0	07/01/2022	ND					

Surrogate: 1-Chlorooctane *87.7 %* *43-149*

Surrogate: 1-Chlorooctadecane *102 %* *42.5-161*

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Analytical Results For:

TERRACON CONSULTANTS
JOSEPH GUESNIER
5827 50TH ST. SUITE 1
LUBBOCK TX, 79424
Fax To:

Received:	07/01/2022	Sampling Date:	06/29/2022
Reported:	07/05/2022	Sampling Type:	Soil
Project Name:	AIKMAN SWD	Sampling Condition:	Cool & Intact
Project Number:	AR207018	Sample Received By:	Shalyn Rodriguez
Project Location:	SPUR ENERGY		

Sample ID: CS - 20 (5-6') (H222825-20)

BTEX 8021B mg/kg Analyzed By: JH

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	07/01/2022	ND	2.11	105	2.00	3.89	
Toluene*	<0.050	0.050	07/01/2022	ND	2.12	106	2.00	2.38	
Ethylbenzene*	<0.050	0.050	07/01/2022	ND	2.11	106	2.00	3.23	
Total Xylenes*	<0.150	0.150	07/01/2022	ND	6.41	107	6.00	3.32	
Total BTEX	<0.300	0.300	07/01/2022	ND					

Surrogate: 4-Bromofluorobenzene (PID *105 %* *69.9-140*

Chloride, SM4500Cl-B mg/kg Analyzed By: AC

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**448**	16.0	07/01/2022	ND	416	104	400	3.77	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	07/01/2022	ND	190	94.9	200	2.05	
DRO >C10-C28*	<10.0	10.0	07/01/2022	ND	203	102	200	0.966	
EXT DRO >C28-C36	<10.0	10.0	07/01/2022	ND					

Surrogate: 1-Chlorooctane *88.6 %* *43-149*

Surrogate: 1-Chlorooctadecane *102 %* *42.5-161*

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Celey D. Keene

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

TERRACON CONSULTANTS
JOSEPH GUESNIER
5827 50TH ST. SUITE 1
LUBBOCK TX, 79424
Fax To:

Received:	07/01/2022	Sampling Date:	06/29/2022
Reported:	07/05/2022	Sampling Type:	Soil
Project Name:	AIKMAN SWD	Sampling Condition:	Cool & Intact
Project Number:	AR207018	Sample Received By:	Shalyn Rodriguez
Project Location:	SPUR ENERGY		

Sample ID: CS - 21 (5-6') (H222825-21)

BTEX 8021B mg/kg **Analyzed By: JH/**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	07/01/2022	ND	1.94	97.1	2.00	7.42	
Toluene*	<0.050	0.050	07/01/2022	ND	1.93	96.3	2.00	7.38	
Ethylbenzene*	<0.050	0.050	07/01/2022	ND	1.93	96.7	2.00	8.01	
Total Xylenes*	<0.150	0.150	07/01/2022	ND	5.89	98.2	6.00	8.21	
Total BTEX	<0.300	0.300	07/01/2022	ND					

Surrogate: 4-Bromofluorobenzene (PID *99.7 %* *69.9-140*

Chloride, SM4500Cl-B mg/kg **Analyzed By: AC**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**560**	16.0	07/01/2022	ND	416	104	400	3.77	

TPH 8015M mg/kg **Analyzed By: MS**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	07/01/2022	ND	190	94.9	200	2.05	
DRO >C10-C28*	**46.1**	10.0	07/01/2022	ND	203	102	200	0.966	
EXT DRO >C28-C36	<10.0	10.0	07/01/2022	ND					

Surrogate: 1-Chlorooctane *93.8 %* *43-149*

Surrogate: 1-Chlorooctadecane *109 %* *42.5-161*

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Analytical Results For:

TERRACON CONSULTANTS
JOSEPH GUESNIER
5827 50TH ST. SUITE 1
LUBBOCK TX, 79424
Fax To:

Received:	07/01/2022	Sampling Date:	06/29/2022
Reported:	07/05/2022	Sampling Type:	Soil
Project Name:	AIKMAN SWD	Sampling Condition:	Cool & Intact
Project Number:	AR207018	Sample Received By:	Shalyn Rodriguez
Project Location:	SPUR ENERGY		

Sample ID: CS - 22 (5-6') (H222825-22)

BTEX 8021B mg/kg Analyzed By: JH/

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	07/01/2022	ND	1.94	97.1	2.00	7.42	
Toluene*	<0.050	0.050	07/01/2022	ND	1.93	96.3	2.00	7.38	
Ethylbenzene*	<0.050	0.050	07/01/2022	ND	1.93	96.7	2.00	8.01	
Total Xylenes*	<0.150	0.150	07/01/2022	ND	5.89	98.2	6.00	8.21	
Total BTEX	<0.300	0.300	07/01/2022	ND					

Surrogate: 4-Bromofluorobenzene (PID *101 %* *69.9-140*

Chloride, SM4500Cl-B mg/kg Analyzed By: AC

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**368**	16.0	07/01/2022	ND	416	104	400	3.77	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	07/01/2022	ND	190	94.9	200	2.05	
DRO >C10-C28*	<10.0	10.0	07/01/2022	ND	203	102	200	0.966	
EXT DRO >C28-C36	<10.0	10.0	07/01/2022	ND					

Surrogate: 1-Chlorooctane *90.5 %* *43-149*

Surrogate: 1-Chlorooctadecane *104 %* *42.5-161*

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Analytical Results For:

TERRACON CONSULTANTS
JOSEPH GUESNIER
5827 50TH ST. SUITE 1
LUBBOCK TX, 79424
Fax To:

Received:	07/01/2022	Sampling Date:	06/29/2022
Reported:	07/05/2022	Sampling Type:	Soil
Project Name:	AIKMAN SWD	Sampling Condition:	Cool & Intact
Project Number:	AR207018	Sample Received By:	Shalyn Rodriguez
Project Location:	SPUR ENERGY		

Sample ID: CS - 23 (5-6') (H222825-23)

BTEX 8021B mg/kg Analyzed By: JH/

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	07/01/2022	ND	1.94	97.1	2.00	7.42	
Toluene*	<0.050	0.050	07/01/2022	ND	1.93	96.3	2.00	7.38	
Ethylbenzene*	<0.050	0.050	07/01/2022	ND	1.93	96.7	2.00	8.01	
Total Xylenes*	<0.150	0.150	07/01/2022	ND	5.89	98.2	6.00	8.21	
Total BTEX	<0.300	0.300	07/01/2022	ND					

Surrogate: 4-Bromofluorobenzene (PID *101 %* *69.9-140*

Chloride, SM4500Cl-B mg/kg Analyzed By: AC

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**336**	16.0	07/01/2022	ND	416	104	400	3.77	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	07/01/2022	ND	190	94.9	200	2.05	
DRO >C10-C28*	<10.0	10.0	07/01/2022	ND	203	102	200	0.966	
EXT DRO >C28-C36	<10.0	10.0	07/01/2022	ND					

Surrogate: 1-Chlorooctane *71.8 %* *43-149*

Surrogate: 1-Chlorooctadecane *82.4 %* *42.5-161*

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Analytical Results For:

TERRACON CONSULTANTS
JOSEPH GUESNIER
5827 50TH ST. SUITE 1
LUBBOCK TX, 79424
Fax To:

Received:	07/01/2022	Sampling Date:	06/29/2022
Reported:	07/05/2022	Sampling Type:	Soil
Project Name:	AIKMAN SWD	Sampling Condition:	Cool & Intact
Project Number:	AR207018	Sample Received By:	Shalyn Rodriguez
Project Location:	SPUR ENERGY		

Sample ID: CS - 24 (5-6') (H222825-24)

BTEX 8021B mg/kg Analyzed By: JH/

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	07/01/2022	ND	1.94	97.1	2.00	7.42	
Toluene*	<0.050	0.050	07/01/2022	ND	1.93	96.3	2.00	7.38	
Ethylbenzene*	<0.050	0.050	07/01/2022	ND	1.93	96.7	2.00	8.01	
Total Xylenes*	<0.150	0.150	07/01/2022	ND	5.89	98.2	6.00	8.21	
Total BTEX	<0.300	0.300	07/01/2022	ND					

Surrogate: 4-Bromofluorobenzene (PID *99.1 %* *69.9-140*

Chloride, SM4500Cl-B mg/kg Analyzed By: AC

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**336**	16.0	07/01/2022	ND	416	104	400	3.77	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	07/01/2022	ND	190	94.9	200	2.05	
DRO >C10-C28*	<10.0	10.0	07/01/2022	ND	203	102	200	0.966	
EXT DRO >C28-C36	<10.0	10.0	07/01/2022	ND					

Surrogate: 1-Chlorooctane *78.0 %* *43-149*

Surrogate: 1-Chlorooctadecane *90.0 %* *42.5-161*

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Analytical Results For:

TERRACON CONSULTANTS
JOSEPH GUESNIER
5827 50TH ST. SUITE 1
LUBBOCK TX, 79424
Fax To:

Received:	07/01/2022	Sampling Date:	06/29/2022
Reported:	07/05/2022	Sampling Type:	Soil
Project Name:	AIKMAN SWD	Sampling Condition:	Cool & Intact
Project Number:	AR207018	Sample Received By:	Shalyn Rodriguez
Project Location:	SPUR ENERGY		

Sample ID: CS - 25 (5-6') (H222825-25)

BTEX 8021B mg/kg Analyzed By: JH/

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	07/01/2022	ND	1.94	97.1	2.00	7.42	
Toluene*	<0.050	0.050	07/01/2022	ND	1.93	96.3	2.00	7.38	
Ethylbenzene*	<0.050	0.050	07/01/2022	ND	1.93	96.7	2.00	8.01	
Total Xylenes*	<0.150	0.150	07/01/2022	ND	5.89	98.2	6.00	8.21	
Total BTEX	<0.300	0.300	07/01/2022	ND					

Surrogate: 4-Bromofluorobenzene (PID *100 %* *69.9-140*

Chloride, SM4500Cl-B mg/kg Analyzed By: AC

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**608**	16.0	07/01/2022	ND	416	104	400	3.77	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	07/01/2022	ND	190	94.9	200	2.05	
DRO >C10-C28*	<10.0	10.0	07/01/2022	ND	203	102	200	0.966	
EXT DRO >C28-C36	<10.0	10.0	07/01/2022	ND					

Surrogate: 1-Chlorooctane *70.7 %* *43-149*

Surrogate: 1-Chlorooctadecane *80.8 %* *42.5-161*

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Analytical Results For:

TERRACON CONSULTANTS
JOSEPH GUESNIER
5827 50TH ST. SUITE 1
LUBBOCK TX, 79424
Fax To:

Received:	07/01/2022	Sampling Date:	06/29/2022
Reported:	07/05/2022	Sampling Type:	Soil
Project Name:	AIKMAN SWD	Sampling Condition:	Cool & Intact
Project Number:	AR207018	Sample Received By:	Shalyn Rodriguez
Project Location:	SPUR ENERGY		

Sample ID: CS - 26 (5-6') (H222825-26)

BTEX 8021B mg/kg Analyzed By: JH/

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	07/01/2022	ND	1.94	97.1	2.00	7.42	
Toluene*	<0.050	0.050	07/01/2022	ND	1.93	96.3	2.00	7.38	
Ethylbenzene*	<0.050	0.050	07/01/2022	ND	1.93	96.7	2.00	8.01	
Total Xylenes*	<0.150	0.150	07/01/2022	ND	5.89	98.2	6.00	8.21	
Total BTEX	<0.300	0.300	07/01/2022	ND					

Surrogate: 4-Bromofluorobenzene (PID *101 %* *69.9-140*

Chloride, SM4500Cl-B mg/kg Analyzed By: AC

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**352**	16.0	07/01/2022	ND	416	104	400	3.77	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	07/02/2022	ND	180	89.8	200	0.520	
DRO >C10-C28*	<10.0	10.0	07/02/2022	ND	198	99.0	200	5.24	
EXT DRO >C28-C36	<10.0	10.0	07/02/2022	ND					

Surrogate: 1-Chlorooctane *70.7 %* *43-149*

Surrogate: 1-Chlorooctadecane *76.0 %* *42.5-161*

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Analytical Results For:

TERRACON CONSULTANTS
JOSEPH GUESNIER
5827 50TH ST. SUITE 1
LUBBOCK TX, 79424
Fax To:

Received:	07/01/2022	Sampling Date:	06/29/2022
Reported:	07/05/2022	Sampling Type:	Soil
Project Name:	AIKMAN SWD	Sampling Condition:	Cool & Intact
Project Number:	AR207018	Sample Received By:	Shalyn Rodriguez
Project Location:	SPUR ENERGY		

Sample ID: CS - 27 (5-6') (H222825-27)

BTEX 8021B mg/kg Analyzed By: JH/

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	07/01/2022	ND	1.94	97.1	2.00	7.42	
Toluene*	<0.050	0.050	07/01/2022	ND	1.93	96.3	2.00	7.38	
Ethylbenzene*	<0.050	0.050	07/01/2022	ND	1.93	96.7	2.00	8.01	
Total Xylenes*	<0.150	0.150	07/01/2022	ND	5.89	98.2	6.00	8.21	
Total BTEX	<0.300	0.300	07/01/2022	ND					

Surrogate: 4-Bromofluorobenzene (PID *101 %* *69.9-140*

Chloride, SM4500Cl-B mg/kg Analyzed By: AC

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**128**	16.0	07/01/2022	ND	416	104	400	3.77	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	07/02/2022	ND	180	89.8	200	0.520	
DRO >C10-C28*	<10.0	10.0	07/02/2022	ND	198	99.0	200	5.24	
EXT DRO >C28-C36	<10.0	10.0	07/02/2022	ND					

Surrogate: 1-Chlorooctane *71.7 %* *43-149*

Surrogate: 1-Chlorooctadecane *76.9 %* *42.5-161*

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Analytical Results For:

TERRACON CONSULTANTS
JOSEPH GUESNIER
5827 50TH ST. SUITE 1
LUBBOCK TX, 79424
Fax To:

Received:	07/01/2022	Sampling Date:	06/29/2022
Reported:	07/05/2022	Sampling Type:	Soil
Project Name:	AIKMAN SWD	Sampling Condition:	Cool & Intact
Project Number:	AR207018	Sample Received By:	Shalyn Rodriguez
Project Location:	SPUR ENERGY		

Sample ID: CS - 28 (5-6') (H222825-28)

BTEX 8021B mg/kg Analyzed By: JH/

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	07/01/2022	ND	1.94	97.1	2.00	7.42	
Toluene*	<0.050	0.050	07/01/2022	ND	1.93	96.3	2.00	7.38	
Ethylbenzene*	<0.050	0.050	07/01/2022	ND	1.93	96.7	2.00	8.01	
Total Xylenes*	<0.150	0.150	07/01/2022	ND	5.89	98.2	6.00	8.21	
Total BTEX	<0.300	0.300	07/01/2022	ND					

Surrogate: 4-Bromofluorobenzene (PID *101 %* *69.9-140*

Chloride, SM4500Cl-B mg/kg Analyzed By: AC

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**48.0**	16.0	07/01/2022	ND	416	104	400	3.77	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	07/02/2022	ND	180	89.8	200	0.520	
DRO >C10-C28*	<10.0	10.0	07/02/2022	ND	198	99.0	200	5.24	
EXT DRO >C28-C36	<10.0	10.0	07/02/2022	ND					

Surrogate: 1-Chlorooctane *72.8 %* *43-149*

Surrogate: 1-Chlorooctadecane *77.6 %* *42.5-161*

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Analytical Results For:

TERRACON CONSULTANTS
JOSEPH GUESNIER
5827 50TH ST. SUITE 1
LUBBOCK TX, 79424
Fax To:

Received:	07/01/2022	Sampling Date:	06/29/2022
Reported:	07/05/2022	Sampling Type:	Soil
Project Name:	AIKMAN SWD	Sampling Condition:	Cool & Intact
Project Number:	AR207018	Sample Received By:	Shalyn Rodriguez
Project Location:	SPUR ENERGY		

Sample ID: CS - 29 (5-6') (H222825-29)

BTEX 8021B mg/kg Analyzed By: JH/

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	07/01/2022	ND	1.94	97.1	2.00	7.42	
Toluene*	<0.050	0.050	07/01/2022	ND	1.93	96.3	2.00	7.38	
Ethylbenzene*	<0.050	0.050	07/01/2022	ND	1.93	96.7	2.00	8.01	
Total Xylenes*	<0.150	0.150	07/01/2022	ND	5.89	98.2	6.00	8.21	
Total BTEX	<0.300	0.300	07/01/2022	ND					

Surrogate: 4-Bromofluorobenzene (PID *99.9 %* *69.9-140*

Chloride, SM4500Cl-B mg/kg Analyzed By: AC

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**304**	16.0	07/01/2022	ND	416	104	400	3.77	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	07/02/2022	ND	180	89.8	200	0.520	
DRO >C10-C28*	<10.0	10.0	07/02/2022	ND	198	99.0	200	5.24	
EXT DRO >C28-C36	<10.0	10.0	07/02/2022	ND					

Surrogate: 1-Chlorooctane *75.4 %* *43-149*

Surrogate: 1-Chlorooctadecane *81.2 %* *42.5-161*

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Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

TERRACON CONSULTANTS
JOSEPH GUESNIER
5827 50TH ST. SUITE 1
LUBBOCK TX, 79424
Fax To:

Received:	07/01/2022	Sampling Date:	06/29/2022
Reported:	07/05/2022	Sampling Type:	Soil
Project Name:	AIKMAN SWD	Sampling Condition:	Cool & Intact
Project Number:	AR207018	Sample Received By:	Shalyn Rodriguez
Project Location:	SPUR ENERGY		

Sample ID: CS - 30 (5-6') (H222825-30)

BTEX 8021B mg/kg Analyzed By: JH/

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	07/01/2022	ND	1.94	97.1	2.00	7.42	
Toluene*	<0.050	0.050	07/01/2022	ND	1.93	96.3	2.00	7.38	
Ethylbenzene*	<0.050	0.050	07/01/2022	ND	1.93	96.7	2.00	8.01	
Total Xylenes*	<0.150	0.150	07/01/2022	ND	5.89	98.2	6.00	8.21	
Total BTEX	<0.300	0.300	07/01/2022	ND					

Surrogate: 4-Bromofluorobenzene (PID *98.0 %* *69.9-140*

Chloride, SM4500Cl-B mg/kg Analyzed By: AC

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**320**	16.0	07/01/2022	ND	416	104	400	3.77	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	07/02/2022	ND	180	89.8	200	0.520	
DRO >C10-C28*	<10.0	10.0	07/02/2022	ND	198	99.0	200	5.24	
EXT DRO >C28-C36	<10.0	10.0	07/02/2022	ND					

Surrogate: 1-Chlorooctane *68.9 %* *43-149*

Surrogate: 1-Chlorooctadecane *74.2 %* *42.5-161*

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Analytical Results For:

TERRACON CONSULTANTS
JOSEPH GUESNIER
5827 50TH ST. SUITE 1
LUBBOCK TX, 79424
Fax To:

Received:	07/01/2022	Sampling Date:	06/29/2022
Reported:	07/05/2022	Sampling Type:	Soil
Project Name:	AIKMAN SWD	Sampling Condition:	Cool & Intact
Project Number:	AR207018	Sample Received By:	Shalyn Rodriguez
Project Location:	SPUR ENERGY		

Sample ID: CS - 31 (5-6') (H222825-31)

BTEX 8021B mg/kg Analyzed By: JH/

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	07/01/2022	ND	1.94	97.1	2.00	7.42	
Toluene*	<0.050	0.050	07/01/2022	ND	1.93	96.3	2.00	7.38	
Ethylbenzene*	<0.050	0.050	07/01/2022	ND	1.93	96.7	2.00	8.01	
Total Xylenes*	<0.150	0.150	07/01/2022	ND	5.89	98.2	6.00	8.21	
Total BTEX	<0.300	0.300	07/01/2022	ND					

Surrogate: 4-Bromofluorobenzene (PID *101 %* *69.9-140*

Chloride, SM4500Cl-B mg/kg Analyzed By: AC

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**1060**	16.0	07/01/2022	ND	416	104	400	3.77	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	07/02/2022	ND	180	89.8	200	0.520	
DRO >C10-C28*	<10.0	10.0	07/02/2022	ND	198	99.0	200	5.24	
EXT DRO >C28-C36	<10.0	10.0	07/02/2022	ND					

Surrogate: 1-Chlorooctane *66.2 %* *43-149*

Surrogate: 1-Chlorooctadecane *70.8 %* *42.5-161*

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Analytical Results For:

TERRACON CONSULTANTS
JOSEPH GUESNIER
5827 50TH ST. SUITE 1
LUBBOCK TX, 79424
Fax To:

Received:	07/01/2022	Sampling Date:	06/29/2022
Reported:	07/05/2022	Sampling Type:	Soil
Project Name:	AIKMAN SWD	Sampling Condition:	Cool & Intact
Project Number:	AR207018	Sample Received By:	Shalyn Rodriguez
Project Location:	SPUR ENERGY		

Sample ID: CS - 32 (5-6') (H222825-32)

BTEX 8021B mg/kg Analyzed By: JH/

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	07/01/2022	ND	1.94	97.1	2.00	7.42	
Toluene*	<0.050	0.050	07/01/2022	ND	1.93	96.3	2.00	7.38	
Ethylbenzene*	<0.050	0.050	07/01/2022	ND	1.93	96.7	2.00	8.01	
Total Xylenes*	<0.150	0.150	07/01/2022	ND	5.89	98.2	6.00	8.21	
Total BTEX	<0.300	0.300	07/01/2022	ND					

Surrogate: 4-Bromofluorobenzene (PID *102 %* *69.9-140*

Chloride, SM4500Cl-B mg/kg Analyzed By: AC

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**432**	16.0	07/01/2022	ND	416	104	400	3.77	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	07/02/2022	ND	180	89.8	200	0.520	
DRO >C10-C28*	<10.0	10.0	07/02/2022	ND	198	99.0	200	5.24	
EXT DRO >C28-C36	<10.0	10.0	07/02/2022	ND					

Surrogate: 1-Chlorooctane *64.2 %* *43-149*

Surrogate: 1-Chlorooctadecane *69.1 %* *42.5-161*

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Analytical Results For:

TERRACON CONSULTANTS
JOSEPH GUESNIER
5827 50TH ST. SUITE 1
LUBBOCK TX, 79424
Fax To:

Received:	07/01/2022	Sampling Date:	06/29/2022
Reported:	07/05/2022	Sampling Type:	Soil
Project Name:	AIKMAN SWD	Sampling Condition:	Cool & Intact
Project Number:	AR207018	Sample Received By:	Shalyn Rodriguez
Project Location:	SPUR ENERGY		

Sample ID: CS - 33 (5-6') (H222825-33)

BTEX 8021B mg/kg **Analyzed By: JH/**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	07/01/2022	ND	1.94	97.1	2.00	7.42	
Toluene*	<0.050	0.050	07/01/2022	ND	1.93	96.3	2.00	7.38	
Ethylbenzene*	<0.050	0.050	07/01/2022	ND	1.93	96.7	2.00	8.01	
Total Xylenes*	<0.150	0.150	07/01/2022	ND	5.89	98.2	6.00	8.21	
Total BTEX	<0.300	0.300	07/01/2022	ND					

Surrogate: 4-Bromofluorobenzene (PID *102 %* *69.9-140*

Chloride, SM4500Cl-B mg/kg **Analyzed By: AC**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**416**	16.0	07/01/2022	ND	416	104	400	3.77	

TPH 8015M mg/kg **Analyzed By: MS**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	07/02/2022	ND	180	89.8	200	0.520	
DRO >C10-C28*	**44.1**	10.0	07/02/2022	ND	198	99.0	200	5.24	
EXT DRO >C28-C36	<10.0	10.0	07/02/2022	ND					

Surrogate: 1-Chlorooctane *63.7 %* *43-149*

Surrogate: 1-Chlorooctadecane *72.2 %* *42.5-161*

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Celey D. Keene

Celey D. Keene, Lab Director/Quality Manager

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Analytical Results For:

TERRACON CONSULTANTS
JOSEPH GUESNIER
5827 50TH ST. SUITE 1
LUBBOCK TX, 79424
Fax To:

Received:	07/01/2022	Sampling Date:	06/29/2022
Reported:	07/05/2022	Sampling Type:	Soil
Project Name:	AIKMAN SWD	Sampling Condition:	Cool & Intact
Project Number:	AR207018	Sample Received By:	Shalyn Rodriguez
Project Location:	SPUR ENERGY		

Sample ID: N - 1 (2-3') (H222825-34)

BTEX 8021B mg/kg Analyzed By: JH/

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	07/01/2022	ND	1.94	97.1	2.00	7.42	
Toluene*	<0.050	0.050	07/01/2022	ND	1.93	96.3	2.00	7.38	
Ethylbenzene*	<0.050	0.050	07/01/2022	ND	1.93	96.7	2.00	8.01	
Total Xylenes*	<0.150	0.150	07/01/2022	ND	5.89	98.2	6.00	8.21	
Total BTEX	<0.300	0.300	07/01/2022	ND					

Surrogate: 4-Bromofluorobenzene (PID *98.7 %* *69.9-140*

Chloride, SM4500Cl-B mg/kg Analyzed By: AC

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**944**	16.0	07/01/2022	ND	416	104	400	3.77	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	07/02/2022	ND	180	89.8	200	0.520	
DRO >C10-C28*	**35.1**	10.0	07/02/2022	ND	198	99.0	200	5.24	
EXT DRO >C28-C36	**10.6**	10.0	07/02/2022	ND					

Surrogate: 1-Chlorooctane *56.3 %* *43-149*

Surrogate: 1-Chlorooctadecane *64.7 %* *42.5-161*

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Celey D. Keene, Lab Director/Quality Manager

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Analytical Results For:

TERRACON CONSULTANTS
JOSEPH GUESNIER
5827 50TH ST. SUITE 1
LUBBOCK TX, 79424
Fax To:

Received:	07/01/2022	Sampling Date:	06/29/2022
Reported:	07/05/2022	Sampling Type:	Soil
Project Name:	AIKMAN SWD	Sampling Condition:	Cool & Intact
Project Number:	AR207018	Sample Received By:	Shalyn Rodriguez
Project Location:	SPUR ENERGY		

Sample ID: N - 2 (2-3') (H222825-35)

BTEX 8021B mg/kg Analyzed By: JH/

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	07/01/2022	ND	1.94	97.1	2.00	7.42	
Toluene*	<0.050	0.050	07/01/2022	ND	1.93	96.3	2.00	7.38	
Ethylbenzene*	<0.050	0.050	07/01/2022	ND	1.93	96.7	2.00	8.01	
Total Xylenes*	<0.150	0.150	07/01/2022	ND	5.89	98.2	6.00	8.21	
Total BTEX	<0.300	0.300	07/01/2022	ND					

Surrogate: 4-Bromofluorobenzene (PID *99.8 %* *69.9-140*

Chloride, SM4500Cl-B mg/kg Analyzed By: AC

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**640**	16.0	07/01/2022	ND	416	104	400	3.77	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	07/02/2022	ND	180	89.8	200	0.520	
DRO >C10-C28*	**105**	10.0	07/02/2022	ND	198	99.0	200	5.24	
EXT DRO >C28-C36	**25.0**	10.0	07/02/2022	ND					

Surrogate: 1-Chlorooctane *66.1 %* *43-149*

Surrogate: 1-Chlorooctadecane *78.6 %* *42.5-161*

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Celey D. Keene, Lab Director/Quality Manager

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Analytical Results For:

TERRACON CONSULTANTS
JOSEPH GUESNIER
5827 50TH ST. SUITE 1
LUBBOCK TX, 79424
Fax To:

Received:	07/01/2022	Sampling Date:	06/29/2022
Reported:	07/05/2022	Sampling Type:	Soil
Project Name:	AIKMAN SWD	Sampling Condition:	Cool & Intact
Project Number:	AR207018	Sample Received By:	Shalyn Rodriguez
Project Location:	SPUR ENERGY		

Sample ID: N - 3 (2-3') (H222825-36)

BTEX 8021B mg/kg Analyzed By: JH/

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	07/01/2022	ND	1.94	97.1	2.00	7.42	
Toluene*	<0.050	0.050	07/01/2022	ND	1.93	96.3	2.00	7.38	
Ethylbenzene*	<0.050	0.050	07/01/2022	ND	1.93	96.7	2.00	8.01	
Total Xylenes*	<0.150	0.150	07/01/2022	ND	5.89	98.2	6.00	8.21	
Total BTEX	<0.300	0.300	07/01/2022	ND					

Surrogate: 4-Bromofluorobenzene (PID *101 %* *69.9-140*

Chloride, SM4500Cl-B mg/kg Analyzed By: AC

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**352**	16.0	07/01/2022	ND	416	104	400	3.77	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	07/02/2022	ND	180	89.8	200	0.520	
DRO >C10-C28*	<10.0	10.0	07/02/2022	ND	198	99.0	200	5.24	
EXT DRO >C28-C36	<10.0	10.0	07/02/2022	ND					

Surrogate: 1-Chlorooctane *64.1 %* *43-149*

Surrogate: 1-Chlorooctadecane *69.6 %* *42.5-161*

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Celey D. Keene, Lab Director/Quality Manager

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Analytical Results For:

TERRACON CONSULTANTS
JOSEPH GUESNIER
5827 50TH ST. SUITE 1
LUBBOCK TX, 79424
Fax To:

Received:	07/01/2022	Sampling Date:	06/29/2022
Reported:	07/05/2022	Sampling Type:	Soil
Project Name:	AIKMAN SWD	Sampling Condition:	Cool & Intact
Project Number:	AR207018	Sample Received By:	Shalyn Rodriguez
Project Location:	SPUR ENERGY		

Sample ID: N - 4 (2-3') (H222825-37)

BTEX 8021B mg/kg Analyzed By: JH/

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	07/01/2022	ND	1.94	97.1	2.00	7.42	
Toluene*	<0.050	0.050	07/01/2022	ND	1.93	96.3	2.00	7.38	
Ethylbenzene*	<0.050	0.050	07/01/2022	ND	1.93	96.7	2.00	8.01	
Total Xylenes*	<0.150	0.150	07/01/2022	ND	5.89	98.2	6.00	8.21	
Total BTEX	<0.300	0.300	07/01/2022	ND					

Surrogate: 4-Bromofluorobenzene (PID *101 %* *69.9-140*

Chloride, SM4500Cl-B mg/kg Analyzed By: AC

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**384**	16.0	07/01/2022	ND	416	104	400	3.77	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	07/02/2022	ND	180	89.8	200	0.520	
DRO >C10-C28*	**26.3**	10.0	07/02/2022	ND	198	99.0	200	5.24	
EXT DRO >C28-C36	<10.0	10.0	07/02/2022	ND					

Surrogate: 1-Chlorooctane *68.7 %* *43-149*

Surrogate: 1-Chlorooctadecane *76.8 %* *42.5-161*

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Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

TERRACON CONSULTANTS
JOSEPH GUESNIER
5827 50TH ST. SUITE 1
LUBBOCK TX, 79424
Fax To:

Received:	07/01/2022	Sampling Date:	06/29/2022
Reported:	07/05/2022	Sampling Type:	Soil
Project Name:	AIKMAN SWD	Sampling Condition:	Cool & Intact
Project Number:	AR207018	Sample Received By:	Shalyn Rodriguez
Project Location:	SPUR ENERGY		

Sample ID: N - 5 (2-3') (H222825-38)

BTEX 8021B mg/kg Analyzed By: JH/

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	07/01/2022	ND	1.94	97.1	2.00	7.42	
Toluene*	<0.050	0.050	07/01/2022	ND	1.93	96.3	2.00	7.38	
Ethylbenzene*	<0.050	0.050	07/01/2022	ND	1.93	96.7	2.00	8.01	
Total Xylenes*	<0.150	0.150	07/01/2022	ND	5.89	98.2	6.00	8.21	
Total BTEX	<0.300	0.300	07/01/2022	ND					

Surrogate: 4-Bromofluorobenzene (PID *101 %* *69.9-140*

Chloride, SM4500Cl-B mg/kg Analyzed By: AC

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**480**	16.0	07/01/2022	ND	416	104	400	3.77	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	07/02/2022	ND	180	89.8	200	0.520	
DRO >C10-C28*	**372**	10.0	07/02/2022	ND	198	99.0	200	5.24	
EXT DRO >C28-C36	**104**	10.0	07/02/2022	ND					

Surrogate: 1-Chlorooctane *57.4 %* *43-149*

Surrogate: 1-Chlorooctadecane *87.0 %* *42.5-161*

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Analytical Results For:

TERRACON CONSULTANTS
JOSEPH GUESNIER
5827 50TH ST. SUITE 1
LUBBOCK TX, 79424
Fax To:

Received:	07/01/2022	Sampling Date:	06/29/2022
Reported:	07/05/2022	Sampling Type:	Soil
Project Name:	AIKMAN SWD	Sampling Condition:	Cool & Intact
Project Number:	AR207018	Sample Received By:	Shalyn Rodriguez
Project Location:	SPUR ENERGY		

Sample ID: N - 6 (2-3') (H222825-39)

BTEX 8021B mg/kg Analyzed By: JH/

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	07/02/2022	ND	1.94	97.1	2.00	7.42	
Toluene*	<0.050	0.050	07/02/2022	ND	1.93	96.3	2.00	7.38	
Ethylbenzene*	<0.050	0.050	07/02/2022	ND	1.93	96.7	2.00	8.01	
Total Xylenes*	<0.150	0.150	07/02/2022	ND	5.89	98.2	6.00	8.21	
Total BTEX	<0.300	0.300	07/02/2022	ND					

Surrogate: 4-Bromofluorobenzene (PID *100 %* *69.9-140*

Chloride, SM4500Cl-B mg/kg Analyzed By: AC

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**256**	16.0	07/01/2022	ND	416	104	400	3.77	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	07/02/2022	ND	180	89.8	200	0.520	
DRO >C10-C28*	<10.0	10.0	07/02/2022	ND	198	99.0	200	5.24	
EXT DRO >C28-C36	<10.0	10.0	07/02/2022	ND					

Surrogate: 1-Chlorooctane *62.4 %* *43-149*

Surrogate: 1-Chlorooctadecane *67.6 %* *42.5-161*

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Analytical Results For:

TERRACON CONSULTANTS
JOSEPH GUESNIER
5827 50TH ST. SUITE 1
LUBBOCK TX, 79424
Fax To:

Received:	07/01/2022	Sampling Date:	06/29/2022
Reported:	07/05/2022	Sampling Type:	Soil
Project Name:	AIKMAN SWD	Sampling Condition:	Cool & Intact
Project Number:	AR207018	Sample Received By:	Shalyn Rodriguez
Project Location:	SPUR ENERGY		

Sample ID: N - 7 (2-3') (H222825-40)

BTEX 8021B mg/kg Analyzed By: JH/

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	07/02/2022	ND	1.94	97.1	2.00	7.42	
Toluene*	<0.050	0.050	07/02/2022	ND	1.93	96.3	2.00	7.38	
Ethylbenzene*	<0.050	0.050	07/02/2022	ND	1.93	96.7	2.00	8.01	
Total Xylenes*	<0.150	0.150	07/02/2022	ND	5.89	98.2	6.00	8.21	
Total BTEX	<0.300	0.300	07/02/2022	ND					

Surrogate: 4-Bromofluorobenzene (PID *101 %* *69.9-140*

Chloride, SM4500Cl-B mg/kg Analyzed By: AC

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**2680**	16.0	07/01/2022	ND	416	104	400	3.77	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	07/02/2022	ND	180	89.8	200	0.520	
DRO >C10-C28*	**82.3**	10.0	07/02/2022	ND	198	99.0	200	5.24	
EXT DRO >C28-C36	**30.8**	10.0	07/02/2022	ND					

Surrogate: 1-Chlorooctane *66.6 %* *43-149*

Surrogate: 1-Chlorooctadecane *78.8 %* *42.5-161*

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Analytical Results For:

TERRACON CONSULTANTS
JOSEPH GUESNIER
5827 50TH ST. SUITE 1
LUBBOCK TX, 79424
Fax To:

Received:	07/01/2022	Sampling Date:	06/29/2022
Reported:	07/05/2022	Sampling Type:	Soil
Project Name:	AIKMAN SWD	Sampling Condition:	Cool & Intact
Project Number:	AR207018	Sample Received By:	Shalyn Rodriguez
Project Location:	SPUR ENERGY		

Sample ID: S - 1 (2-3') (H222825-41)

BTEX 8021B mg/kg **Analyzed By: JH**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	07/01/2022	ND	2.15	107	2.00	6.63	
Toluene*	<0.050	0.050	07/01/2022	ND	2.12	106	2.00	6.13	
Ethylbenzene*	<0.050	0.050	07/01/2022	ND	2.09	105	2.00	6.93	
Total Xylenes*	<0.150	0.150	07/01/2022	ND	6.32	105	6.00	7.87	
Total BTEX	<0.300	0.300	07/01/2022	ND					

Surrogate: 4-Bromofluorobenzene (PID *106 %* *69.9-140*

Chloride, SM4500Cl-B mg/kg **Analyzed By: AC**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**400**	16.0	07/01/2022	ND	416	104	400	3.77	

TPH 8015M mg/kg **Analyzed By: MS**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	07/02/2022	ND	180	89.8	200	0.520	
DRO >C10-C28*	**98.2**	10.0	07/02/2022	ND	198	99.0	200	5.24	
EXT DRO >C28-C36	**18.9**	10.0	07/02/2022	ND					

Surrogate: 1-Chlorooctane *61.7 %* *43-149*

Surrogate: 1-Chlorooctadecane *74.1 %* *42.5-161*

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Analytical Results For:

TERRACON CONSULTANTS
JOSEPH GUESNIER
5827 50TH ST. SUITE 1
LUBBOCK TX, 79424
Fax To:

Received:	07/01/2022	Sampling Date:	06/29/2022
Reported:	07/05/2022	Sampling Type:	Soil
Project Name:	AIKMAN SWD	Sampling Condition:	Cool & Intact
Project Number:	AR207018	Sample Received By:	Shalyn Rodriguez
Project Location:	SPUR ENERGY		

Sample ID: S - 2 (2-3') (H222825-42)

BTEX 8021B mg/kg Analyzed By: JH

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	07/01/2022	ND	2.15	107	2.00	6.63	
Toluene*	<0.050	0.050	07/01/2022	ND	2.12	106	2.00	6.13	
Ethylbenzene*	<0.050	0.050	07/01/2022	ND	2.09	105	2.00	6.93	
Total Xylenes*	<0.150	0.150	07/01/2022	ND	6.32	105	6.00	7.87	
Total BTEX	<0.300	0.300	07/01/2022	ND					

Surrogate: 4-Bromofluorobenzene (PID *105 %* *69.9-140*

Chloride, SM4500Cl-B mg/kg Analyzed By: AC

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**576**	16.0	07/01/2022	ND	416	104	400	3.77	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	07/02/2022	ND	180	89.8	200	0.520	
DRO >C10-C28*	<10.0	10.0	07/02/2022	ND	198	99.0	200	5.24	
EXT DRO >C28-C36	<10.0	10.0	07/02/2022	ND					

Surrogate: 1-Chlorooctane *65.2 %* *43-149*

Surrogate: 1-Chlorooctadecane *71.3 %* *42.5-161*

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Analytical Results For:

TERRACON CONSULTANTS
JOSEPH GUESNIER
5827 50TH ST. SUITE 1
LUBBOCK TX, 79424
Fax To:

Received:	07/01/2022	Sampling Date:	06/29/2022
Reported:	07/05/2022	Sampling Type:	Soil
Project Name:	AIKMAN SWD	Sampling Condition:	Cool & Intact
Project Number:	AR207018	Sample Received By:	Shalyn Rodriguez
Project Location:	SPUR ENERGY		

Sample ID: S - 3 (2-3') (H222825-43)

BTEX 8021B mg/kg **Analyzed By: JH**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	07/01/2022	ND	2.15	107	2.00	6.63	
Toluene*	<0.050	0.050	07/01/2022	ND	2.12	106	2.00	6.13	
Ethylbenzene*	<0.050	0.050	07/01/2022	ND	2.09	105	2.00	6.93	
Total Xylenes*	<0.150	0.150	07/01/2022	ND	6.32	105	6.00	7.87	
Total BTEX	<0.300	0.300	07/01/2022	ND					

Surrogate: 4-Bromofluorobenzene (PID *107 %* *69.9-140*

Chloride, SM4500Cl-B mg/kg **Analyzed By: AC**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**304**	16.0	07/01/2022	ND	416	104	400	3.77	

TPH 8015M mg/kg **Analyzed By: MS**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	07/02/2022	ND	180	89.8	200	0.520	
DRO >C10-C28*	<10.0	10.0	07/02/2022	ND	198	99.0	200	5.24	
EXT DRO >C28-C36	<10.0	10.0	07/02/2022	ND					

Surrogate: 1-Chlorooctane *51.2 %* *43-149*

Surrogate: 1-Chlorooctadecane *55.7 %* *42.5-161*

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Analytical Results For:

TERRACON CONSULTANTS
JOSEPH GUESNIER
5827 50TH ST. SUITE 1
LUBBOCK TX, 79424
Fax To:

Received:	07/01/2022	Sampling Date:	06/29/2022
Reported:	07/05/2022	Sampling Type:	Soil
Project Name:	AIKMAN SWD	Sampling Condition:	Cool & Intact
Project Number:	AR207018	Sample Received By:	Shalyn Rodriguez
Project Location:	SPUR ENERGY		

Sample ID: S - 4 (2-3') (H222825-44)

BTEX 8021B mg/kg Analyzed By: JH

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	07/01/2022	ND	2.15	107	2.00	6.63	
Toluene*	<0.050	0.050	07/01/2022	ND	2.12	106	2.00	6.13	
Ethylbenzene*	<0.050	0.050	07/01/2022	ND	2.09	105	2.00	6.93	
Total Xylenes*	<0.150	0.150	07/01/2022	ND	6.32	105	6.00	7.87	
Total BTEX	<0.300	0.300	07/01/2022	ND					

Surrogate: 4-Bromofluorobenzene (PID *104 %* *69.9-140*

Chloride, SM4500Cl-B mg/kg Analyzed By: AC

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**400**	16.0	07/01/2022	ND	416	104	400	3.77	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	07/02/2022	ND	180	89.8	200	0.520	
DRO >C10-C28*	<10.0	10.0	07/02/2022	ND	198	99.0	200	5.24	
EXT DRO >C28-C36	<10.0	10.0	07/02/2022	ND					

Surrogate: 1-Chlorooctane *66.3 %* *43-149*

Surrogate: 1-Chlorooctadecane *71.0 %* *42.5-161*

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Analytical Results For:

TERRACON CONSULTANTS
JOSEPH GUESNIER
5827 50TH ST. SUITE 1
LUBBOCK TX, 79424
Fax To:

Received:	07/01/2022	Sampling Date:	06/29/2022
Reported:	07/05/2022	Sampling Type:	Soil
Project Name:	AIKMAN SWD	Sampling Condition:	Cool & Intact
Project Number:	AR207018	Sample Received By:	Shalyn Rodriguez
Project Location:	SPUR ENERGY		

Sample ID: S - 5 (2-3') (H222825-45)

BTEX 8021B mg/kg Analyzed By: JH

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	07/01/2022	ND	2.15	107	2.00	6.63	
Toluene*	<0.050	0.050	07/01/2022	ND	2.12	106	2.00	6.13	
Ethylbenzene*	<0.050	0.050	07/01/2022	ND	2.09	105	2.00	6.93	
Total Xylenes*	<0.150	0.150	07/01/2022	ND	6.32	105	6.00	7.87	
Total BTEX	<0.300	0.300	07/01/2022	ND					

Surrogate: 4-Bromofluorobenzene (PID *104 %* *69.9-140*

Chloride, SM4500Cl-B mg/kg Analyzed By: AC

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**720**	16.0	07/01/2022	ND	416	104	400	3.77	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	07/02/2022	ND	180	89.8	200	0.520	
DRO >C10-C28*	<10.0	10.0	07/02/2022	ND	198	99.0	200	5.24	
EXT DRO >C28-C36	<10.0	10.0	07/02/2022	ND					

Surrogate: 1-Chlorooctane *63.2 %* *43-149*

Surrogate: 1-Chlorooctadecane *68.0 %* *42.5-161*

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Celey D. Keene

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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Analytical Results For:

TERRACON CONSULTANTS
JOSEPH GUESNIER
5827 50TH ST. SUITE 1
LUBBOCK TX, 79424
Fax To:

Received:	07/01/2022	Sampling Date:	06/29/2022
Reported:	07/05/2022	Sampling Type:	Soil
Project Name:	AIKMAN SWD	Sampling Condition:	Cool & Intact
Project Number:	AR207018	Sample Received By:	Shalyn Rodriguez
Project Location:	SPUR ENERGY		

Sample ID: S - 6 (2-3') (H222825-46)

BTEX 8021B mg/kg **Analyzed By: JH**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	07/02/2022	ND	2.15	107	2.00	6.63	
Toluene*	<0.050	0.050	07/02/2022	ND	2.12	106	2.00	6.13	
Ethylbenzene*	<0.050	0.050	07/02/2022	ND	2.09	105	2.00	6.93	
Total Xylenes*	<0.150	0.150	07/02/2022	ND	6.32	105	6.00	7.87	
Total BTEX	<0.300	0.300	07/02/2022	ND					

Surrogate: 4-Bromofluorobenzene (PID *105 %* *69.9-140*

Chloride, SM4500Cl-B mg/kg **Analyzed By: AC**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**240**	16.0	07/01/2022	ND	416	104	400	3.77	

TPH 8015M mg/kg **Analyzed By: MS**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	07/02/2022	ND	215	107	200	4.06	
DRO >C10-C28*	<10.0	10.0	07/02/2022	ND	227	113	200	2.87	
EXT DRO >C28-C36	<10.0	10.0	07/02/2022	ND					

Surrogate: 1-Chlorooctane *89.9 %* *43-149*

Surrogate: 1-Chlorooctadecane *90.6 %* *42.5-161*

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Analytical Results For:

TERRACON CONSULTANTS
JOSEPH GUESNIER
5827 50TH ST. SUITE 1
LUBBOCK TX, 79424
Fax To:

Received:	07/01/2022	Sampling Date:	06/29/2022
Reported:	07/05/2022	Sampling Type:	Soil
Project Name:	AIKMAN SWD	Sampling Condition:	Cool & Intact
Project Number:	AR207018	Sample Received By:	Shalyn Rodriguez
Project Location:	SPUR ENERGY		

Sample ID: S - 7 (2-3') (H222825-47)

BTEX 8021B mg/kg **Analyzed By: JH**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	07/02/2022	ND	2.15	107	2.00	6.63	
Toluene*	<0.050	0.050	07/02/2022	ND	2.12	106	2.00	6.13	
Ethylbenzene*	<0.050	0.050	07/02/2022	ND	2.09	105	2.00	6.93	
Total Xylenes*	<0.150	0.150	07/02/2022	ND	6.32	105	6.00	7.87	
Total BTEX	<0.300	0.300	07/02/2022	ND					

Surrogate: 4-Bromofluorobenzene (PID *105 %* *69.9-140*

Chloride, SM4500Cl-B mg/kg **Analyzed By: AC**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**480**	16.0	07/01/2022	ND	416	104	400	3.77	

TPH 8015M mg/kg **Analyzed By: MS**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	07/02/2022	ND	215	107	200	4.06	
DRO >C10-C28*	<10.0	10.0	07/02/2022	ND	227	113	200	2.87	
EXT DRO >C28-C36	<10.0	10.0	07/02/2022	ND					

Surrogate: 1-Chlorooctane *87.9 %* *43-149*

Surrogate: 1-Chlorooctadecane *87.6 %* *42.5-161*

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Analytical Results For:

TERRACON CONSULTANTS
JOSEPH GUESNIER
5827 50TH ST. SUITE 1
LUBBOCK TX, 79424
Fax To:

Received:	07/01/2022	Sampling Date:	06/29/2022
Reported:	07/05/2022	Sampling Type:	Soil
Project Name:	AIKMAN SWD	Sampling Condition:	Cool & Intact
Project Number:	AR207018	Sample Received By:	Shalyn Rodriguez
Project Location:	SPUR ENERGY		

Sample ID: W - 1 (2-3') (H222825-48)

BTEX 8021B mg/kg **Analyzed By: JH**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	07/02/2022	ND	2.15	107	2.00	6.63	
Toluene*	<0.050	0.050	07/02/2022	ND	2.12	106	2.00	6.13	
Ethylbenzene*	<0.050	0.050	07/02/2022	ND	2.09	105	2.00	6.93	
Total Xylenes*	<0.150	0.150	07/02/2022	ND	6.32	105	6.00	7.87	
Total BTEX	<0.300	0.300	07/02/2022	ND					

Surrogate: 4-Bromofluorobenzene (PID *104 %* *69.9-140*

Chloride, SM4500Cl-B mg/kg **Analyzed By: AC**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**880**	16.0	07/01/2022	ND	416	104	400	3.77	

TPH 8015M mg/kg **Analyzed By: MS**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	07/02/2022	ND	215	107	200	4.06	
DRO >C10-C28*	<10.0	10.0	07/02/2022	ND	227	113	200	2.87	
EXT DRO >C28-C36	<10.0	10.0	07/02/2022	ND					

Surrogate: 1-Chlorooctane *90.8 %* *43-149*

Surrogate: 1-Chlorooctadecane *90.0 %* *42.5-161*

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Analytical Results For:

TERRACON CONSULTANTS
JOSEPH GUESNIER
5827 50TH ST. SUITE 1
LUBBOCK TX, 79424
Fax To:

Received:	07/01/2022	Sampling Date:	06/29/2022
Reported:	07/05/2022	Sampling Type:	Soil
Project Name:	AIKMAN SWD	Sampling Condition:	Cool & Intact
Project Number:	AR207018	Sample Received By:	Shalyn Rodriguez
Project Location:	SPUR ENERGY		

Sample ID: W - 2 (2-3') (H222825-49)

BTEX 8021B mg/kg **Analyzed By: JH**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	07/02/2022	ND	2.15	107	2.00	6.63	
Toluene*	<0.050	0.050	07/02/2022	ND	2.12	106	2.00	6.13	
Ethylbenzene*	<0.050	0.050	07/02/2022	ND	2.09	105	2.00	6.93	
Total Xylenes*	<0.150	0.150	07/02/2022	ND	6.32	105	6.00	7.87	
Total BTEX	<0.300	0.300	07/02/2022	ND					

Surrogate: 4-Bromofluorobenzene (PID *104 %* *69.9-140*

Chloride, SM4500Cl-B mg/kg **Analyzed By: AC**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**336**	16.0	07/01/2022	ND	416	104	400	3.77	

TPH 8015M mg/kg **Analyzed By: MS**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	07/02/2022	ND	215	107	200	4.06	
DRO >C10-C28*	**671**	10.0	07/02/2022	ND	227	113	200	2.87	
EXT DRO >C28-C36	**215**	10.0	07/02/2022	ND					

Surrogate: 1-Chlorooctane *84.1 %* *43-149*

Surrogate: 1-Chlorooctadecane *118 %* *42.5-161*

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Analytical Results For:

TERRACON CONSULTANTS
JOSEPH GUESNIER
5827 50TH ST. SUITE 1
LUBBOCK TX, 79424
Fax To:

Received:	07/01/2022	Sampling Date:	06/29/2022
Reported:	07/05/2022	Sampling Type:	Soil
Project Name:	AIKMAN SWD	Sampling Condition:	Cool & Intact
Project Number:	AR207018	Sample Received By:	Shalyn Rodriguez
Project Location:	SPUR ENERGY		

Sample ID: W - 3 (2-3') (H222825-50)

BTEX 8021B mg/kg **Analyzed By: JH**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	07/02/2022	ND	2.15	107	2.00	6.63	
Toluene*	<0.050	0.050	07/02/2022	ND	2.12	106	2.00	6.13	
Ethylbenzene*	<0.050	0.050	07/02/2022	ND	2.09	105	2.00	6.93	
Total Xylenes*	<0.150	0.150	07/02/2022	ND	6.32	105	6.00	7.87	
Total BTEX	<0.300	0.300	07/02/2022	ND					

Surrogate: 4-Bromofluorobenzene (PID *102 %* *69.9-140*

Chloride, SM4500Cl-B mg/kg **Analyzed By: AC**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**560**	16.0	07/01/2022	ND	416	104	400	3.77	

TPH 8015M mg/kg **Analyzed By: MS**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	07/02/2022	ND	215	107	200	4.06	
DRO >C10-C28*	<10.0	10.0	07/02/2022	ND	227	113	200	2.87	
EXT DRO >C28-C36	<10.0	10.0	07/02/2022	ND					

Surrogate: 1-Chlorooctane *100 %* *43-149*

Surrogate: 1-Chlorooctadecane *102 %* *42.5-161*

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Analytical Results For:

TERRACON CONSULTANTS
JOSEPH GUESNIER
5827 50TH ST. SUITE 1
LUBBOCK TX, 79424
Fax To:

Received:	07/01/2022	Sampling Date:	06/29/2022
Reported:	07/05/2022	Sampling Type:	Soil
Project Name:	AIKMAN SWD	Sampling Condition:	Cool & Intact
Project Number:	AR207018	Sample Received By:	Shalyn Rodriguez
Project Location:	SPUR ENERGY		

Sample ID: E - 1 (2-3') (H222825-51)

BTEX 8021B mg/kg Analyzed By: JH

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	07/02/2022	ND	2.15	107	2.00	6.63	
Toluene*	<0.050	0.050	07/02/2022	ND	2.12	106	2.00	6.13	
Ethylbenzene*	<0.050	0.050	07/02/2022	ND	2.09	105	2.00	6.93	
Total Xylenes*	<0.150	0.150	07/02/2022	ND	6.32	105	6.00	7.87	
Total BTEX	<0.300	0.300	07/02/2022	ND					

Surrogate: 4-Bromofluorobenzene (PID *104 %* *69.9-140*

Chloride, SM4500Cl-B mg/kg Analyzed By: AC

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**1730**	16.0	07/01/2022	ND	416	104	400	3.77	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	07/02/2022	ND	215	107	200	4.06	
DRO >C10-C28*	<10.0	10.0	07/02/2022	ND	227	113	200	2.87	
EXT DRO >C28-C36	<10.0	10.0	07/02/2022	ND					

Surrogate: 1-Chlorooctane *92.8 %* *43-149*

Surrogate: 1-Chlorooctadecane *93.8 %* *42.5-161*

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Analytical Results For:

TERRACON CONSULTANTS
JOSEPH GUESNIER
5827 50TH ST. SUITE 1
LUBBOCK TX, 79424
Fax To:

Received:	07/01/2022	Sampling Date:	06/29/2022
Reported:	07/05/2022	Sampling Type:	Soil
Project Name:	AIKMAN SWD	Sampling Condition:	Cool & Intact
Project Number:	AR207018	Sample Received By:	Shalyn Rodriguez
Project Location:	SPUR ENERGY		

Sample ID: E - 2 (2-3') (H222825-52)

BTEX 8021B mg/kg Analyzed By: JH

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	07/02/2022	ND	2.15	107	2.00	6.63	
Toluene*	<0.050	0.050	07/02/2022	ND	2.12	106	2.00	6.13	
Ethylbenzene*	<0.050	0.050	07/02/2022	ND	2.09	105	2.00	6.93	
Total Xylenes*	<0.150	0.150	07/02/2022	ND	6.32	105	6.00	7.87	
Total BTEX	<0.300	0.300	07/02/2022	ND					

Surrogate: 4-Bromofluorobenzene (PID *105 %* *69.9-140*

Chloride, SM4500Cl-B mg/kg Analyzed By: AC

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**608**	16.0	07/01/2022	ND	416	104	400	3.77	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	07/02/2022	ND	215	107	200	4.06	
DRO >C10-C28*	<10.0	10.0	07/02/2022	ND	227	113	200	2.87	
EXT DRO >C28-C36	<10.0	10.0	07/02/2022	ND					

Surrogate: 1-Chlorooctane *99.6 %* *43-149*

Surrogate: 1-Chlorooctadecane *99.9 %* *42.5-161*

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Analytical Results For:

TERRACON CONSULTANTS
JOSEPH GUESNIER
5827 50TH ST. SUITE 1
LUBBOCK TX, 79424
Fax To:

Received:	07/01/2022	Sampling Date:	06/29/2022
Reported:	07/05/2022	Sampling Type:	Soil
Project Name:	AIKMAN SWD	Sampling Condition:	Cool & Intact
Project Number:	AR207018	Sample Received By:	Shalyn Rodriguez
Project Location:	SPUR ENERGY		

Sample ID: E - 3 (2-3') (H222825-53)

BTEX 8021B mg/kg **Analyzed By: JH**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	07/02/2022	ND	2.15	107	2.00	6.63	
Toluene*	<0.050	0.050	07/02/2022	ND	2.12	106	2.00	6.13	
Ethylbenzene*	<0.050	0.050	07/02/2022	ND	2.09	105	2.00	6.93	
Total Xylenes*	<0.150	0.150	07/02/2022	ND	6.32	105	6.00	7.87	
Total BTEX	<0.300	0.300	07/02/2022	ND					

Surrogate: 4-Bromofluorobenzene (PID *104 %* *69.9-140*

Chloride, SM4500Cl-B mg/kg **Analyzed By: AC**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**240**	16.0	07/01/2022	ND	416	104	400	3.77	

TPH 8015M mg/kg **Analyzed By: MS**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	07/02/2022	ND	215	107	200	4.06	
DRO >C10-C28*	<10.0	10.0	07/02/2022	ND	227	113	200	2.87	
EXT DRO >C28-C36	<10.0	10.0	07/02/2022	ND					

Surrogate: 1-Chlorooctane *93.2 %* *43-149*

Surrogate: 1-Chlorooctadecane *93.7 %* *42.5-161*

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Analytical Results For:

TERRACON CONSULTANTS
JOSEPH GUESNIER
5827 50TH ST. SUITE 1
LUBBOCK TX, 79424
Fax To:

Received:	07/01/2022	Sampling Date:	06/29/2022
Reported:	07/05/2022	Sampling Type:	Soil
Project Name:	AIKMAN SWD	Sampling Condition:	Cool & Intact
Project Number:	AR207018	Sample Received By:	Shalyn Rodriguez
Project Location:	SPUR ENERGY		

Sample ID: TN - 1 (1-2') (H222825-54)

BTEX 8021B mg/kg Analyzed By: JH

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	07/02/2022	ND	2.15	107	2.00	6.63	
Toluene*	<0.050	0.050	07/02/2022	ND	2.12	106	2.00	6.13	
Ethylbenzene*	<0.050	0.050	07/02/2022	ND	2.09	105	2.00	6.93	
Total Xylenes*	<0.150	0.150	07/02/2022	ND	6.32	105	6.00	7.87	
Total BTEX	<0.300	0.300	07/02/2022	ND					

Surrogate: 4-Bromofluorobenzene (PID *105 %* *69.9-140*

Chloride, SM4500Cl-B mg/kg Analyzed By: AC

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**6400**	16.0	07/01/2022	ND	416	104	400	3.77	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	07/02/2022	ND	215	107	200	4.06	
DRO >C10-C28*	<10.0	10.0	07/02/2022	ND	227	113	200	2.87	
EXT DRO >C28-C36	<10.0	10.0	07/02/2022	ND					

Surrogate: 1-Chlorooctane *93.3 %* *43-149*

Surrogate: 1-Chlorooctadecane *94.4 %* *42.5-161*

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Celey D. Keene

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

TERRACON CONSULTANTS
JOSEPH GUESNIER
5827 50TH ST. SUITE 1
LUBBOCK TX, 79424
Fax To:

Received:	07/01/2022	Sampling Date:	06/29/2022
Reported:	07/05/2022	Sampling Type:	Soil
Project Name:	AIKMAN SWD	Sampling Condition:	Cool & Intact
Project Number:	AR207018	Sample Received By:	Shalyn Rodriguez
Project Location:	SPUR ENERGY		

Sample ID: TN - 2 (1-2') (H222825-55)

BTEX 8021B mg/kg Analyzed By: JH

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	07/02/2022	ND	2.15	107	2.00	6.63	
Toluene*	<0.050	0.050	07/02/2022	ND	2.12	106	2.00	6.13	
Ethylbenzene*	<0.050	0.050	07/02/2022	ND	2.09	105	2.00	6.93	
Total Xylenes*	<0.150	0.150	07/02/2022	ND	6.32	105	6.00	7.87	
Total BTEX	<0.300	0.300	07/02/2022	ND					

Surrogate: 4-Bromofluorobenzene (PID *104 %* *69.9-140*

Chloride, SM4500Cl-B mg/kg Analyzed By: AC

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**3240**	16.0	07/01/2022	ND	416	104	400	3.77	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	07/02/2022	ND	215	107	200	4.06	
DRO >C10-C28*	<10.0	10.0	07/02/2022	ND	227	113	200	2.87	
EXT DRO >C28-C36	<10.0	10.0	07/02/2022	ND					

Surrogate: 1-Chlorooctane *98.5 %* *43-149*

Surrogate: 1-Chlorooctadecane *101 %* *42.5-161*

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Analytical Results For:

TERRACON CONSULTANTS
JOSEPH GUESNIER
5827 50TH ST. SUITE 1
LUBBOCK TX, 79424
Fax To:

Received:	07/01/2022	Sampling Date:	06/29/2022
Reported:	07/05/2022	Sampling Type:	Soil
Project Name:	AIKMAN SWD	Sampling Condition:	Cool & Intact
Project Number:	AR207018	Sample Received By:	Shalyn Rodriguez
Project Location:	SPUR ENERGY		

Sample ID: TE (1-2') (H222825-56)

BTEX 8021B mg/kg Analyzed By: JH

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	07/02/2022	ND	2.15	107	2.00	6.63	
Toluene*	<0.050	0.050	07/02/2022	ND	2.12	106	2.00	6.13	
Ethylbenzene*	<0.050	0.050	07/02/2022	ND	2.09	105	2.00	6.93	
Total Xylenes*	<0.150	0.150	07/02/2022	ND	6.32	105	6.00	7.87	
Total BTEX	<0.300	0.300	07/02/2022	ND					

Surrogate: 4-Bromofluorobenzene (PID *104 %* *69.9-140*

Chloride, SM4500Cl-B mg/kg Analyzed By: AC

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**800**	16.0	07/05/2022	ND	432	108	400	0.00	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	07/02/2022	ND	215	107	200	4.06	
DRO >C10-C28*	<10.0	10.0	07/02/2022	ND	227	113	200	2.87	
EXT DRO >C28-C36	<10.0	10.0	07/02/2022	ND					

Surrogate: 1-Chlorooctane *73.6 %* *43-149*

Surrogate: 1-Chlorooctadecane *74.2 %* *42.5-161*

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Analytical Results For:

TERRACON CONSULTANTS
JOSEPH GUESNIER
5827 50TH ST. SUITE 1
LUBBOCK TX, 79424
Fax To:

Received:	07/01/2022	Sampling Date:	06/29/2022
Reported:	07/05/2022	Sampling Type:	Soil
Project Name:	AIKMAN SWD	Sampling Condition:	Cool & Intact
Project Number:	AR207018	Sample Received By:	Shalyn Rodriguez
Project Location:	SPUR ENERGY		

Sample ID: TF - 1 (2-3') (H222825-57)

BTEX 8021B mg/kg **Analyzed By: JH**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	07/02/2022	ND	2.15	107	2.00	6.63	
Toluene*	<0.050	0.050	07/02/2022	ND	2.12	106	2.00	6.13	
Ethylbenzene*	<0.050	0.050	07/02/2022	ND	2.09	105	2.00	6.93	
Total Xylenes*	<0.150	0.150	07/02/2022	ND	6.32	105	6.00	7.87	
Total BTEX	<0.300	0.300	07/02/2022	ND					

Surrogate: 4-Bromofluorobenzene (PID *105 %* *69.9-140*

Chloride, SM4500Cl-B mg/kg **Analyzed By: AC**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**448**	16.0	07/05/2022	ND	432	108	400	0.00	

TPH 8015M mg/kg **Analyzed By: MS**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	07/02/2022	ND	215	107	200	4.06	
DRO >C10-C28*	<10.0	10.0	07/02/2022	ND	227	113	200	2.87	
EXT DRO >C28-C36	<10.0	10.0	07/02/2022	ND					

Surrogate: 1-Chlorooctane *81.6 %* *43-149*

Surrogate: 1-Chlorooctadecane *83.4 %* *42.5-161*

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Analytical Results For:

TERRACON CONSULTANTS
JOSEPH GUESNIER
5827 50TH ST. SUITE 1
LUBBOCK TX, 79424
Fax To:

Received:	07/01/2022	Sampling Date:	06/29/2022
Reported:	07/05/2022	Sampling Type:	Soil
Project Name:	AIKMAN SWD	Sampling Condition:	Cool & Intact
Project Number:	AR207018	Sample Received By:	Shalyn Rodriguez
Project Location:	SPUR ENERGY		

Sample ID: TF - 2 (2-3') (H222825-58)

BTEX 8021B mg/kg **Analyzed By: JH**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	07/02/2022	ND	2.15	107	2.00	6.63	
Toluene*	<0.050	0.050	07/02/2022	ND	2.12	106	2.00	6.13	
Ethylbenzene*	<0.050	0.050	07/02/2022	ND	2.09	105	2.00	6.93	
Total Xylenes*	<0.150	0.150	07/02/2022	ND	6.32	105	6.00	7.87	
Total BTEX	<0.300	0.300	07/02/2022	ND					

Surrogate: 4-Bromofluorobenzene (PID *103 %* *69.9-140*

Chloride, SM4500Cl-B mg/kg **Analyzed By: AC**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**416**	16.0	07/05/2022	ND	432	108	400	0.00	

TPH 8015M mg/kg **Analyzed By: MS**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	07/02/2022	ND	215	107	200	4.06	
DRO >C10-C28*	<10.0	10.0	07/02/2022	ND	227	113	200	2.87	
EXT DRO >C28-C36	<10.0	10.0	07/02/2022	ND					

Surrogate: 1-Chlorooctane *75.7 %* *43-149*

Surrogate: 1-Chlorooctadecane *77.3 %* *42.5-161*

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Analytical Results For:

TERRACON CONSULTANTS
JOSEPH GUESNIER
5827 50TH ST. SUITE 1
LUBBOCK TX, 79424
Fax To:

Received:	07/01/2022	Sampling Date:	06/29/2022
Reported:	07/05/2022	Sampling Type:	Soil
Project Name:	AIKMAN SWD	Sampling Condition:	Cool & Intact
Project Number:	AR207018	Sample Received By:	Shalyn Rodriguez
Project Location:	SPUR ENERGY		

Sample ID: TW (1-2') (H222825-59)

BTEX 8021B mg/kg Analyzed By: JH

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	07/02/2022	ND	2.15	107	2.00	6.63	
Toluene*	<0.050	0.050	07/02/2022	ND	2.12	106	2.00	6.13	
Ethylbenzene*	<0.050	0.050	07/02/2022	ND	2.09	105	2.00	6.93	
Total Xylenes*	<0.150	0.150	07/02/2022	ND	6.32	105	6.00	7.87	
Total BTEX	<0.300	0.300	07/02/2022	ND					

Surrogate: 4-Bromofluorobenzene (PID *104 %* *69.9-140*

Chloride, SM4500Cl-B mg/kg Analyzed By: AC

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**416**	16.0	07/05/2022	ND	432	108	400	0.00	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	07/02/2022	ND	215	107	200	4.06	
DRO >C10-C28*	**21.1**	10.0	07/02/2022	ND	227	113	200	2.87	
EXT DRO >C28-C36	<10.0	10.0	07/02/2022	ND					

Surrogate: 1-Chlorooctane *78.0 %* *43-149*

Surrogate: 1-Chlorooctadecane *78.9 %* *42.5-161*

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Analytical Results For:

TERRACON CONSULTANTS
JOSEPH GUESNIER
5827 50TH ST. SUITE 1
LUBBOCK TX, 79424
Fax To:

Received:	07/01/2022	Sampling Date:	06/29/2022
Reported:	07/05/2022	Sampling Type:	Soil
Project Name:	AIKMAN SWD	Sampling Condition:	Cool & Intact
Project Number:	AR207018	Sample Received By:	Shalyn Rodriguez
Project Location:	SPUR ENERGY		

Sample ID: TS - 1 (1-2') (H222825-60)

BTEX 8021B mg/kg Analyzed By: JH

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	07/02/2022	ND	2.15	107	2.00	6.63	
Toluene*	<0.050	0.050	07/02/2022	ND	2.12	106	2.00	6.13	
Ethylbenzene*	<0.050	0.050	07/02/2022	ND	2.09	105	2.00	6.93	
Total Xylenes*	<0.150	0.150	07/02/2022	ND	6.32	105	6.00	7.87	
Total BTEX	<0.300	0.300	07/02/2022	ND					

Surrogate: 4-Bromofluorobenzene (PID *103 %* *69.9-140*

Chloride, SM4500Cl-B mg/kg Analyzed By: AC

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**2360**	16.0	07/05/2022	ND	432	108	400	0.00	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	07/02/2022	ND	215	107	200	4.06	
DRO >C10-C28*	<10.0	10.0	07/02/2022	ND	227	113	200	2.87	
EXT DRO >C28-C36	<10.0	10.0	07/02/2022	ND					

Surrogate: 1-Chlorooctane *80.1 %* *43-149*

Surrogate: 1-Chlorooctadecane *81.0 %* *42.5-161*

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Analytical Results For:

TERRACON CONSULTANTS
JOSEPH GUESNIER
5827 50TH ST. SUITE 1
LUBBOCK TX, 79424
Fax To:

Received:	07/01/2022	Sampling Date:	06/29/2022
Reported:	07/05/2022	Sampling Type:	Soil
Project Name:	AIKMAN SWD	Sampling Condition:	Cool & Intact
Project Number:	AR207018	Sample Received By:	Shalyn Rodriguez
Project Location:	SPUR ENERGY		

Sample ID: TS - 2 (1-2') (H222825-61)

BTEX 8021B mg/kg Analyzed By: JH

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	07/02/2022	ND	2.14	107	2.00	5.28	
Toluene*	<0.050	0.050	07/02/2022	ND	2.10	105	2.00	5.19	
Ethylbenzene*	<0.050	0.050	07/02/2022	ND	2.07	104	2.00	5.24	
Total Xylenes*	<0.150	0.150	07/02/2022	ND	6.29	105	6.00	5.19	
Total BTEX	<0.300	0.300	07/02/2022	ND					

Surrogate: 4-Bromofluorobenzene (PID *102 %* *69.9-140*

Chloride, SM4500Cl-B mg/kg Analyzed By: AC

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**2680**	16.0	07/05/2022	ND	432	108	400	0.00	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	07/02/2022	ND	215	107	200	4.06	
DRO >C10-C28*	<10.0	10.0	07/02/2022	ND	227	113	200	2.87	
EXT DRO >C28-C36	<10.0	10.0	07/02/2022	ND					

Surrogate: 1-Chlorooctane *82.0 %* *43-149*

Surrogate: 1-Chlorooctadecane *83.2 %* *42.5-161*

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Celey D. Keene, Lab Director/Quality Manager

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Notes and Definitions

ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C
	Samples reported on an as received basis (wet) unless otherwise noted on report

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Celey D. Keene, Lab Director/Quality Manager

Terracon

CHAIN OF CUSTODY RECORD

Laboratory: Xenco
Address: 6701 Aberdeen
Lubbock, Texas 79424

Office Location: Lubbock
Project Manager: J. Guesnier
Sampler's Name: J. Guesnier
Phone:
Contact:
SRS #:
Sampler's Signature

7-1-22 SR

Project Number: AR207018
Project Name: Aikman SWD

ANALYSIS REQUESTED

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

Page 1 of 4

Matrix	Date	Time	Comp	Grab	Identifying Marks of Sample(s)	Start Depth	End Depth	No. Type of Containers: 4 oz Glass	2 oz Glass	250 ml Poly	Chloride (EPA Method 300) 4500	TPH Extended 8015	BTEX (EPA Method 8021B)	Lab Sample ID
S	6/29/2022	10:00	X		CS-1 (5-6)	5'	6'	X			X	X	X	1
S	6/29/2022	10:05	X		CS-2 (5-6)	5'	6'	X			X	X	X	2
S	6/29/2022	10:10	X		CS-3 (5-6)	5'	6'	X			X	X	X	3
S	6/29/2022	10:15	X		CS-4 (5-6)	5'	6'	X			X	X	X	4
S	6/29/2022	10:20	X		CS-5 (5-6)	5'	6'	X			X	X	X	5
S	6/29/2022	10:25	X		CS-6 (5-6)	5'	6'	X			X	X	X	6
S	6/29/2022	10:30	X		CS-7 (5-6)	5'	6'	X			X	X	X	7
S	6/29/2022	10:35	X		CS-8 (5-6)	5'	6'	X			X	X	X	8
S	6/29/2022	10:40	X		CS-9 (5-6)	5'	6'	X			X	X	X	9
S	6/29/2022	10:45	X		CS-10 (5-6)	5'	6'	X			X	X	X	10
S	6/29/2022	10:50	X		CS-11 (5-6)	5'	6'	X			X	X	X	11
S	6/29/2022	10:55	X		CS-12 (5-6)	5'	6'	X			X	X	X	12
S	6/29/2022	11:00	X		CS-13 (5-6)	5'	6'	X			X	X	X	13
S	6/29/2022	11:05	X		CS-14 (5-6)	5'	6'	X			X	X	X	14
S	6/29/2022	11:10	X		CS-15 (5-6)	5'	6'	X			X	X	X	15
S	6/29/2022	11:15	X		CS-16 (5-6)	5'	6'	X			X	X	X	16
S	6/29/2022	11:20	X		CS-17 (5-6)	5'	6'	X			X	X	X	17
S	6/29/2022	11:25	X		CS-18 (5-6)	5'	6'	X			X	X	X	18
S	6/29/2022	11:30	X		CS-19 (5-6)	5'	6'	X			X	X	X	19

HH222825 Lab Sample ID

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

TRRP Laboratory Review Checklist ☐ Yes ☐ No

Relinquished by (Signature)	Date:	Time:	Received by (Signature)	Date:	Time:
	7-1-22	7:30	Austo Ellis	7-1-22	7:31
Austo Ellis	7-1-22	8:35	Rodriguez	7-1-22	1838

Bill To: Spur Energy Partners

-2.3° C-0.5°
-2.8° #113 SR

e-mail results to:
joseph.guesnier@terraconc.com
erin.loyd@terracon.com
brady.thornton@terracon.com

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

Received by OCD: 4/10/2023 1:07:45 PM

Released to Imaging: 8/29/2023 1:29:02 PM

CHAIN OF CUSTODY RECORD

Terracon

Laboratory: Xenco
Address: 6701 Aberdeen Lubbock, Texas 79424 JG
Phone:
Contact:
SRS #:

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

Project Number: AR207018
Project Name: Aikman SWD

ANALYSIS REQUESTED: Chloride (EPA Method 300) 4500; TPH Extended 8015; BTEX (EPA Method 8021B)

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

Page 2 of 4

Matrix	Date	Time	Comp	Grab	Identifying Marks of Sample(s)	Start Depth	End Depth	No. Type of Containers: 4 oz Glass	2 oz Glass	250 ml Poly	Chloride	TPH Extended 8015	BTEX (EPA Method 8021B)	Lab Sample ID
S	6/29/2022	11:35	X		CS-20 (5-6)	5'	6'	X			X	X	X	H222825-20
S	6/29/2022	11:40	X		CS-21 (5-6)	5'	6'	X			X	X	X	21
S	6/29/2022	11:45	X		CS-22 (5-6)	5'	6'	X			X	X	X	22
S	6/29/2022	11:50	X		CS-23 (5-6)	5'	6'	X			X	X	X	23
S	6/29/2022	11:55	X		CS-24 (5-6)	5'	6'	X			X	X	X	24
S	6/29/2022	12:00	X		CS-25 (5-6)	5'	6'	X			X	X	X	25
S	6/29/2022	12:02	X		CS-26 (5-6)	5'	6'	X			X	X	X	26
S	6/29/2022	12:04	X		CS-27 (5-6)	5'	6'	X			X	X	X	27
S	6/29/2022	12:06	X		CS-28 (5-6)	5'	6'	X			X	X	X	28
S	6/29/2022	12:08	X		CS-29 (5-6)	5'	6'	X			X	X	X	29
S	6/29/2022	12:10	X		CS-30 (5-6)	5'	6'	X			X	X	X	30
S	6/29/2022	12:12	X		CS-31 (5-6)	5'	6'	X			X	X	X	31
S	6/29/2022	12:14	X		CS-32 (5-6)	5'	6'	X			X	X	X	32
S	6/29/2022	12:16	X		CS-33 (5-6)	5'	6'	X			X	X	X	33
S	6/29/2022	12:18	X		N-1 (2-3)	2'	3'	X			X	X	X	34
S	6/29/2022	12:20	X		N-2 (2-3)	2'	3'	X			X	X	X	35
S	6/29/2022	12:22	X		N-3 (2-3)	2'	3'	X			X	X	X	36
S	6/29/2022	12:24	X		N-4 (2-3)	2'	3'	X			X	X	X	37
S	6/29/2022	12:26	X		N-5 (2-3)	2'	3'	X			X	X	X	38

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

TRRP Laboratory Review Checklist ☐ Yes ☐ No

Relinquished by (Signature)	Date	Time	Received by (Signature)	Date	Time
[signature]	7-1-22	7:30	[signature]	7-1-22	7:31
[signature]	7-1-22	8:35	[signature]	7-1-22	0838

Bill To: Spur Energy Partners

-23° C -0.5°
-2.8° #113
SR

e-mail results to:
joseph.guesnier@terraconc.com
erin.loyd@terracon.com
brady.thornton@terracon.com

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

Received by OCD: 4/10/2023 1:07:45 PM

Released to Imaging: 8/29/2023 1:29:02 PM

CHAIN OF CUSTODY RECORD

Terracon

Laboratory: Xenco
Address: 6701 Aberdeen
Lubbock, Texas 79424

Office Location: Lubbock
Phone:
Project Manager: J. Guesnier
Contact:
Sampler's Name: J. Guesnier
SRS #:
Sampler's Signature

ANALYSIS REQUESTED

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

Page 3 of 4

Project Number: AR207018
Project Name: Aikman SWD

No. Type of Containers

Matrix	Date	Time	Comp	Grab	Identifying Marks of Sample(s)	Start Depth	End Depth	4 oz Glass	2 oz Glass	250 ml Poly		Chloride (EPA Method 300)	TPH Extended 8015	BTEX (EPA Method 8021B)					Lab Sample ID
S	6/29/2022	12:28	X		N-6 (2-3)	2'	3'	X				X	X	X					39
S	6/29/2022	12:30	X		N-7 (2-3)	2'	3'	X				X	X	X					40
S	6/29/2022	12:32	X		S-1 (2-3)	2'	3'	X				X	X	X					41
S	6/29/2022	12:34	X		S-2 (2-3)	2'	3'	X				X	X	X					42
S	6/29/2022	12:36	X		S-3 (2-3)	2'	3'	X				X	X	X					43
S	6/29/2022	12:38	X		S-4 (2-3)	2'	3'	X				X	X	X					44
S	6/29/2022	12:40	X		S-5 (2-3)	2'	3'	X				X	X	X					45
S	6/29/2022	12:42	X		S-6 (2-3)	2'	3'	X				X	X	X					46
S	6/29/2022	12:44	X		S-7 (2-3)	2'	3'	X				X	X	X					47
S	6/29/2022	12:46	X		W-1 (2-3)	2'	3'	X				X	X	X					48
S	6/29/2022	12:48	X		W-2 (2-3)	2'	3'	X				X	X	X					49
S	6/29/2022	12:50	X		W-3 (2-3)	2'	3'	X				X	X	X					50
S	6/29/2022	12:52	X		E-1 (2-3)	2'	3'	X				X	X	X					51
S	6/29/2022	12:54	X		E-2 (2-3)	2'	3'	X				X	X	X					52
S	6/29/2022	12:56	X		E-3 (2-3)	2'	3'	X				X	X	X					53
S	6/29/2022	12:58	X		TN-1 (1-2)	1'	2'	X				X	X	X					54
S	6/29/2022	13:00	X		TN-2 (1-2)	1'	2'	X				X	X	X					55
S	6/29/2022	13:02	X		TE (1-2)	1'	2'	X				X	X	X					56
S	6/29/2022	13:04	X		TF-1 (2-3)	2'	3'	X				X	X	X					57

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

Relinquished by (Signature)	Date:	Time:	Received by (Signature)	Date:	Time:
	7-1-22	7:30		7-1-22	7:31
	7-1-22	8:35		7-1-22	0838

Bill To: Spur Energy Partners

-2.3° C -0.5°
-2.8° #113 SR

e-mail results to:
joseph.guesnier@terraconc.com
erin.loyd@terracon.com
brady.thornton@terracon.com

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

Received by OCD: 4/10/2023 1:07:45 PM

Released to Imaging: 8/29/2023 1:29:02 PM

Page 348 of 472

Page 67 of 67

Terracon

CHAIN OF CUSTODY RECORD

Laboratory: Xenco
Address: 6701 Aberdeen
Lubbock, Texas 79424

Office Location: Lubbock
Project Manager: J. Guesnier
Sampler's Name: J. Guesnier
Phone:
Contact:
SRS #:
Sampler's Signature

Project Number: AR207018
Project Name: Aikman SWD

ANALYSIS REQUESTED

LAB USE ONLY
DUE DATE:
TEMP OF COOLER WHEN RECEIVED (°C)
Page 4 of 4

Matrix	Date	Time	Comp	Grab	Identifying Marks of Sample(s)	Start Depth	End Depth	No. Type of Containers: 4 oz Glass	2 oz Glass	250 ml Poly		Chloride (EPA Method 300)	TPH Extended 8015	BTEX (EPA Method 8021B)					Lab Sample ID
S	6/29/2022	13:06	X		TF-2 (2-3)	2'	3'	X				X	X	X					58
S	6/29/2022	13:08	X		TW (1-2)	1'	2'	X				X	X	X					59
S	6/29/2022	13:10	X		TS-1 (1-2)	1'	2'	X				X	X	X					60
S	6/29/2022	13:12	X		TS-2 (1-2)	1'	2'	X				X	X	X					61

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

TRRP Laboratory Review Checklist ☐ Yes ☐ No

Relinquished by (Signature)	Date:	Time:	Received by (Signature)	Date:	Time:
	7-1-22	7:30		7-1-22	7:31
	7-1-22	8:35		7-1-22	0838

Bill To: Spur Energy Partners

-2.3°C/C-0.5°C
-2.8°C #113 SR

e-mail results to:
joseph.guesnier@terraconc.com
erin.loyd@terracon.com
brady.thornton@terracon.com

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

Received by OCD: 4/10/2023 1:07:45 PM

Released to Imaging: 8/29/2023 1:29:02 PM

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

July 26, 2022

JOSEPH GUESNIER

TERRACON CONSULTANTS

5827 50TH ST. SUITE 1

LUBBOCK, TX 79424

RE: AIKMAN SWD

Enclosed are the results of analyses for samples received by the laboratory on 07/21/22 10:19.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-22-15. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (*). For a complete list of accredited analytes and matrices visit the TCEQ website at www.tceq.texas.gov/field/qa/lab_accred_certif.html.

Cardinal Laboratories is accreditated through the State of Colorado Department of Public Health and Environment for:

Method EPA 552.2	Haloacetic Acids (HAA-5)
Method EPA 524.2	Total Trihalomethanes (TTHM)
Method EPA 524.4	Regulated VOCs (V1, V2, V3)

Accreditation applies to public drinking water matrices.

This report meets NELAP requirements and is made up of a cover page, analytical results, and a copy of the original chain-of-custody. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Celey D. Keene

Celey D. Keene

Lab Director/Quality Manager

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

TERRACON CONSULTANTS
JOSEPH GUESNIER
5827 50TH ST. SUITE 1
LUBBOCK TX, 79424
Fax To:

Received:	07/21/2022	Sampling Date:	07/20/2022
Reported:	07/26/2022	Sampling Type:	Soil
Project Name:	AIKMAN SWD	Sampling Condition:	Cool & Intact
Project Number:	AR207018	Sample Received By:	Tamara Oldaker
Project Location:	SPUR ENERGY		

Sample ID: CS - 7.1 (6-7) (H223190-01)

BTEX 8021B mg/kg Analyzed By: JH/

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	07/24/2022	ND	2.03	102	2.00	9.56	
Toluene*	<0.050	0.050	07/24/2022	ND	2.08	104	2.00	10.2	
Ethylbenzene*	<0.050	0.050	07/24/2022	ND	2.08	104	2.00	9.54	
Total Xylenes*	<0.150	0.150	07/24/2022	ND	6.33	106	6.00	9.72	
Total BTEX	<0.300	0.300	07/24/2022	ND					

Surrogate: 4-Bromofluorobenzene (PID *104 %* *69.9-140*

Chloride, SM4500Cl-B mg/kg Analyzed By: GM

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**112**	16.0	07/25/2022	ND	400	100	400	3.92	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	07/25/2022	ND	220	110	200	0.757	
DRO >C10-C28*	<10.0	10.0	07/25/2022	ND	223	112	200	1.38	
EXT DRO >C28-C36	<10.0	10.0	07/25/2022	ND					

Surrogate: 1-Chlorooctane *71.7 %* *43-149*

Surrogate: 1-Chlorooctadecane *80.2 %* *42.5-161*

Cardinal Laboratories *=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

TERRACON CONSULTANTS
JOSEPH GUESNIER
5827 50TH ST. SUITE 1
LUBBOCK TX, 79424
Fax To:

Received:	07/21/2022	Sampling Date:	07/20/2022
Reported:	07/26/2022	Sampling Type:	Soil
Project Name:	AIKMAN SWD	Sampling Condition:	Cool & Intact
Project Number:	AR207018	Sample Received By:	Tamara Oldaker
Project Location:	SPUR ENERGY		

Sample ID: CS - 8.1 (6-7) (H223190-02)

BTEX 8021B mg/kg Analyzed By: JH/

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	07/24/2022	ND	2.03	102	2.00	9.56	
Toluene*	<0.050	0.050	07/24/2022	ND	2.08	104	2.00	10.2	
Ethylbenzene*	<0.050	0.050	07/24/2022	ND	2.08	104	2.00	9.54	
Total Xylenes*	<0.150	0.150	07/24/2022	ND	6.33	106	6.00	9.72	
Total BTEX	<0.300	0.300	07/24/2022	ND					

Surrogate: 4-Bromofluorobenzene (PID *104 %* *69.9-140*

Chloride, SM4500Cl-B mg/kg Analyzed By: GM

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**128**	16.0	07/25/2022	ND	400	100	400	3.92	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	07/25/2022	ND	220	110	200	0.757	
DRO >C10-C28*	<10.0	10.0	07/25/2022	ND	223	112	200	1.38	
EXT DRO >C28-C36	<10.0	10.0	07/25/2022	ND					

Surrogate: 1-Chlorooctane *67.6 %* *43-149*

Surrogate: 1-Chlorooctadecane *75.1 %* *42.5-161*

Cardinal Laboratories *=Accredited Analyte

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of the services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

TERRACON CONSULTANTS
JOSEPH GUESNIER
5827 50TH ST. SUITE 1
LUBBOCK TX, 79424
Fax To:

Received:	07/21/2022	Sampling Date:	07/20/2022
Reported:	07/26/2022	Sampling Type:	Soil
Project Name:	AIKMAN SWD	Sampling Condition:	Cool & Intact
Project Number:	AR207018	Sample Received By:	Tamara Oldaker
Project Location:	SPUR ENERGY		

Sample ID: CS - 9.1 (6-7) (H223190-03)

BTEX 8021B mg/kg Analyzed By: JH/

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	07/24/2022	ND	2.03	102	2.00	9.56	
Toluene*	<0.050	0.050	07/24/2022	ND	2.08	104	2.00	10.2	
Ethylbenzene*	<0.050	0.050	07/24/2022	ND	2.08	104	2.00	9.54	
Total Xylenes*	<0.150	0.150	07/24/2022	ND	6.33	106	6.00	9.72	
Total BTEX	<0.300	0.300	07/24/2022	ND					

Surrogate: 4-Bromofluorobenzene (PID *103 %* *69.9-140*

Chloride, SM4500Cl-B mg/kg Analyzed By: GM

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**112**	16.0	07/25/2022	ND	400	100	400	3.92	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	07/25/2022	ND	220	110	200	0.757	
DRO >C10-C28*	<10.0	10.0	07/25/2022	ND	223	112	200	1.38	
EXT DRO >C28-C36	<10.0	10.0	07/25/2022	ND					

Surrogate: 1-Chlorooctane *67.5 %* *43-149*

Surrogate: 1-Chlorooctadecane *75.8 %* *42.5-161*

Cardinal Laboratories *=Accredited Analyte

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of the services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

TERRACON CONSULTANTS
JOSEPH GUESNIER
5827 50TH ST. SUITE 1
LUBBOCK TX, 79424
Fax To:

Received:	07/21/2022	Sampling Date:	07/20/2022
Reported:	07/26/2022	Sampling Type:	Soil
Project Name:	AIKMAN SWD	Sampling Condition:	Cool & Intact
Project Number:	AR207018	Sample Received By:	Tamara Oldaker
Project Location:	SPUR ENERGY		

Sample ID: CS - 10.1 (6-7) (H223190-04)

BTEX 8021B mg/kg Analyzed By: JH/

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	07/24/2022	ND	2.03	102	2.00	9.56	
Toluene*	<0.050	0.050	07/24/2022	ND	2.08	104	2.00	10.2	
Ethylbenzene*	<0.050	0.050	07/24/2022	ND	2.08	104	2.00	9.54	
Total Xylenes*	<0.150	0.150	07/24/2022	ND	6.33	106	6.00	9.72	
Total BTEX	<0.300	0.300	07/24/2022	ND					

Surrogate: 4-Bromofluorobenzene (PID *104 %* *69.9-140*

Chloride, SM4500Cl-B mg/kg Analyzed By: GM

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**112**	16.0	07/25/2022	ND	400	100	400	3.92	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	07/25/2022	ND	190	94.9	200	0.511	
DRO >C10-C28*	<10.0	10.0	07/25/2022	ND	202	101	200	2.04	
EXT DRO >C28-C36	<10.0	10.0	07/25/2022	ND					

Surrogate: 1-Chlorooctane *76.9 %* *43-149*

Surrogate: 1-Chlorooctadecane *86.1 %* *42.5-161*

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Analytical Results For:

TERRACON CONSULTANTS
JOSEPH GUESNIER
5827 50TH ST. SUITE 1
LUBBOCK TX, 79424
Fax To:

Received:	07/21/2022	Sampling Date:	07/20/2022
Reported:	07/26/2022	Sampling Type:	Soil
Project Name:	AIKMAN SWD	Sampling Condition:	Cool & Intact
Project Number:	AR207018	Sample Received By:	Tamara Oldaker
Project Location:	SPUR ENERGY		

Sample ID: CS - 25.1 (6-7) (H223190-05)

BTEX 8021B mg/kg Analyzed By: JH/

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	07/25/2022	ND	2.10	105	2.00	1.50	
Toluene*	<0.050	0.050	07/25/2022	ND	2.16	108	2.00	1.18	
Ethylbenzene*	<0.050	0.050	07/25/2022	ND	2.18	109	2.00	1.13	
Total Xylenes*	<0.150	0.150	07/25/2022	ND	6.64	111	6.00	1.64	
Total BTEX	<0.300	0.300	07/25/2022	ND					

Surrogate: 4-Bromofluorobenzene (PID *103 %* *69.9-140*

Chloride, SM4500Cl-B mg/kg Analyzed By: GM

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**128**	16.0	07/25/2022	ND	400	100	400	3.92	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	07/25/2022	ND	190	94.9	200	0.511	
DRO >C10-C28*	<10.0	10.0	07/25/2022	ND	202	101	200	2.04	
EXT DRO >C28-C36	<10.0	10.0	07/25/2022	ND					

Surrogate: 1-Chlorooctane *73.1 %* *43-149*

Surrogate: 1-Chlorooctadecane *82.1 %* *42.5-161*

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Analytical Results For:

TERRACON CONSULTANTS
JOSEPH GUESNIER
5827 50TH ST. SUITE 1
LUBBOCK TX, 79424
Fax To:

Received:	07/21/2022	Sampling Date:	07/20/2022
Reported:	07/26/2022	Sampling Type:	Soil
Project Name:	AIKMAN SWD	Sampling Condition:	Cool & Intact
Project Number:	AR207018	Sample Received By:	Tamara Oldaker
Project Location:	SPUR ENERGY		

Sample ID: CS - 31.1 (6-7) (H223190-06)

BTEX 8021B mg/kg Analyzed By: JH/

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	07/25/2022	ND	2.10	105	2.00	1.50	
Toluene*	<0.050	0.050	07/25/2022	ND	2.16	108	2.00	1.18	
Ethylbenzene*	<0.050	0.050	07/25/2022	ND	2.18	109	2.00	1.13	
Total Xylenes*	<0.150	0.150	07/25/2022	ND	6.64	111	6.00	1.64	
Total BTEX	<0.300	0.300	07/25/2022	ND					

Surrogate: 4-Bromofluorobenzene (PID *103 %* *69.9-140*

Chloride, SM4500Cl-B mg/kg Analyzed By: GM

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**96.0**	16.0	07/25/2022	ND	432	108	400	0.00	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	07/25/2022	ND	190	94.9	200	0.511	
DRO >C10-C28*	<10.0	10.0	07/25/2022	ND	202	101	200	2.04	
EXT DRO >C28-C36	<10.0	10.0	07/25/2022	ND					

Surrogate: 1-Chlorooctane *72.1 %* *43-149*

Surrogate: 1-Chlorooctadecane *87.0 %* *42.5-161*

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Analytical Results For:

TERRACON CONSULTANTS
JOSEPH GUESNIER
5827 50TH ST. SUITE 1
LUBBOCK TX, 79424
Fax To:

Received:	07/21/2022	Sampling Date:	07/20/2022
Reported:	07/26/2022	Sampling Type:	Soil
Project Name:	AIKMAN SWD	Sampling Condition:	Cool & Intact
Project Number:	AR207018	Sample Received By:	Tamara Oldaker
Project Location:	SPUR ENERGY		

Sample ID: N - 1.1 (2-3) (H223190-07)

BTEX 8021B mg/kg Analyzed By: JH/

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	07/25/2022	ND	2.10	105	2.00	1.50	
Toluene*	<0.050	0.050	07/25/2022	ND	2.16	108	2.00	1.18	
Ethylbenzene*	<0.050	0.050	07/25/2022	ND	2.18	109	2.00	1.13	
Total Xylenes*	<0.150	0.150	07/25/2022	ND	6.64	111	6.00	1.64	
Total BTEX	<0.300	0.300	07/25/2022	ND					

Surrogate: 4-Bromofluorobenzene (PID *103 %* *69.9-140*

Chloride, SM4500Cl-B mg/kg Analyzed By: GM

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**112**	16.0	07/25/2022	ND	432	108	400	0.00	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	07/25/2022	ND	190	94.9	200	0.511	
DRO >C10-C28*	<10.0	10.0	07/25/2022	ND	202	101	200	2.04	
EXT DRO >C28-C36	<10.0	10.0	07/25/2022	ND					

Surrogate: 1-Chlorooctane *70.1 %* *43-149*

Surrogate: 1-Chlorooctadecane *78.9 %* *42.5-161*

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Analytical Results For:

TERRACON CONSULTANTS
JOSEPH GUESNIER
5827 50TH ST. SUITE 1
LUBBOCK TX, 79424
Fax To:

Received:	07/21/2022	Sampling Date:	07/20/2022
Reported:	07/26/2022	Sampling Type:	Soil
Project Name:	AIKMAN SWD	Sampling Condition:	Cool & Intact
Project Number:	AR207018	Sample Received By:	Tamara Oldaker
Project Location:	SPUR ENERGY		

Sample ID: N - 2.1 (2-3) (H223190-08)

BTEX 8021B mg/kg Analyzed By: JH/

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	07/25/2022	ND	2.10	105	2.00	1.50	
Toluene*	<0.050	0.050	07/25/2022	ND	2.16	108	2.00	1.18	
Ethylbenzene*	<0.050	0.050	07/25/2022	ND	2.18	109	2.00	1.13	
Total Xylenes*	<0.150	0.150	07/25/2022	ND	6.64	111	6.00	1.64	
Total BTEX	<0.300	0.300	07/25/2022	ND					

Surrogate: 4-Bromofluorobenzene (PID *105 %* *69.9-140*

Chloride, SM4500Cl-B mg/kg Analyzed By: GM

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**128**	16.0	07/25/2022	ND	432	108	400	0.00	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	07/25/2022	ND	190	94.9	200	0.511	
DRO >C10-C28*	<10.0	10.0	07/25/2022	ND	202	101	200	2.04	
EXT DRO >C28-C36	<10.0	10.0	07/25/2022	ND					

Surrogate: 1-Chlorooctane *78.6 %* *43-149*

Surrogate: 1-Chlorooctadecane *89.5 %* *42.5-161*

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Analytical Results For:

TERRACON CONSULTANTS
JOSEPH GUESNIER
5827 50TH ST. SUITE 1
LUBBOCK TX, 79424
Fax To:

Received:	07/21/2022	Sampling Date:	07/20/2022
Reported:	07/26/2022	Sampling Type:	Soil
Project Name:	AIKMAN SWD	Sampling Condition:	Cool & Intact
Project Number:	AR207018	Sample Received By:	Tamara Oldaker
Project Location:	SPUR ENERGY		

Sample ID: N - 5.1 (2-3) (H223190-09)

BTEX 8021B mg/kg Analyzed By: JH/

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	07/25/2022	ND	2.10	105	2.00	1.50	
Toluene*	<0.050	0.050	07/25/2022	ND	2.16	108	2.00	1.18	
Ethylbenzene*	<0.050	0.050	07/25/2022	ND	2.18	109	2.00	1.13	
Total Xylenes*	<0.150	0.150	07/25/2022	ND	6.64	111	6.00	1.64	
Total BTEX	<0.300	0.300	07/25/2022	ND					

Surrogate: 4-Bromofluorobenzene (PID *104 %* *69.9-140*

Chloride, SM4500Cl-B mg/kg Analyzed By: GM

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**96.0**	16.0	07/25/2022	ND	432	108	400	0.00	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	07/25/2022	ND	190	94.9	200	0.511	
DRO >C10-C28*	<10.0	10.0	07/25/2022	ND	202	101	200	2.04	
EXT DRO >C28-C36	<10.0	10.0	07/25/2022	ND					

Surrogate: 1-Chlorooctane *65.6 %* *43-149*

Surrogate: 1-Chlorooctadecane *74.0 %* *42.5-161*

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Analytical Results For:

TERRACON CONSULTANTS
JOSEPH GUESNIER
5827 50TH ST. SUITE 1
LUBBOCK TX, 79424
Fax To:

Received:	07/21/2022	Sampling Date:	07/20/2022
Reported:	07/26/2022	Sampling Type:	Soil
Project Name:	AIKMAN SWD	Sampling Condition:	Cool & Intact
Project Number:	AR207018	Sample Received By:	Tamara Oldaker
Project Location:	SPUR ENERGY		

Sample ID: N - 7.1 (2-3) (H223190-10)

BTEX 8021B mg/kg Analyzed By: JH/

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	07/25/2022	ND	2.10	105	2.00	1.50	
Toluene*	<0.050	0.050	07/25/2022	ND	2.16	108	2.00	1.18	
Ethylbenzene*	<0.050	0.050	07/25/2022	ND	2.18	109	2.00	1.13	
Total Xylenes*	<0.150	0.150	07/25/2022	ND	6.64	111	6.00	1.64	
Total BTEX	<0.300	0.300	07/25/2022	ND					

Surrogate: 4-Bromofluorobenzene (PID *104 %* *69.9-140*

Chloride, SM4500Cl-B mg/kg Analyzed By: GM

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**128**	16.0	07/25/2022	ND	432	108	400	0.00	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	07/25/2022	ND	190	94.9	200	0.511	
DRO >C10-C28*	<10.0	10.0	07/25/2022	ND	202	101	200	2.04	
EXT DRO >C28-C36	<10.0	10.0	07/25/2022	ND					

Surrogate: 1-Chlorooctane *73.8 %* *43-149*

Surrogate: 1-Chlorooctadecane *82.9 %* *42.5-161*

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Analytical Results For:

TERRACON CONSULTANTS
JOSEPH GUESNIER
5827 50TH ST. SUITE 1
LUBBOCK TX, 79424
Fax To:

Received:	07/21/2022	Sampling Date:	07/20/2022
Reported:	07/26/2022	Sampling Type:	Soil
Project Name:	AIKMAN SWD	Sampling Condition:	Cool & Intact
Project Number:	AR207018	Sample Received By:	Tamara Oldaker
Project Location:	SPUR ENERGY		

Sample ID: S - 1.1 (2-3) (H223190-11)

BTEX 8021B mg/kg Analyzed By: JH/

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	07/25/2022	ND	2.10	105	2.00	1.50	
Toluene*	<0.050	0.050	07/25/2022	ND	2.16	108	2.00	1.18	
Ethylbenzene*	<0.050	0.050	07/25/2022	ND	2.18	109	2.00	1.13	
Total Xylenes*	<0.150	0.150	07/25/2022	ND	6.64	111	6.00	1.64	
Total BTEX	<0.300	0.300	07/25/2022	ND					

Surrogate: 4-Bromofluorobenzene (PID *104 %* *69.9-140*

Chloride, SM4500Cl-B mg/kg Analyzed By: GM

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**128**	16.0	07/25/2022	ND	432	108	400	0.00	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	07/25/2022	ND	190	94.9	200	0.511	
DRO >C10-C28*	<10.0	10.0	07/25/2022	ND	202	101	200	2.04	
EXT DRO >C28-C36	<10.0	10.0	07/25/2022	ND					

Surrogate: 1-Chlorooctane *79.5 %* *43-149*

Surrogate: 1-Chlorooctadecane *88.9 %* *42.5-161*

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Analytical Results For:

TERRACON CONSULTANTS
JOSEPH GUESNIER
5827 50TH ST. SUITE 1
LUBBOCK TX, 79424
Fax To:

Received:	07/21/2022	Sampling Date:	07/20/2022
Reported:	07/26/2022	Sampling Type:	Soil
Project Name:	AIKMAN SWD	Sampling Condition:	Cool & Intact
Project Number:	AR207018	Sample Received By:	Tamara Oldaker
Project Location:	SPUR ENERGY		

Sample ID: S - 5.1 (2-3) (H223190-12)

BTEX 8021B mg/kg Analyzed By: JH/

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	07/25/2022	ND	2.10	105	2.00	1.50	
Toluene*	<0.050	0.050	07/25/2022	ND	2.16	108	2.00	1.18	
Ethylbenzene*	<0.050	0.050	07/25/2022	ND	2.18	109	2.00	1.13	
Total Xylenes*	<0.150	0.150	07/25/2022	ND	6.64	111	6.00	1.64	
Total BTEX	<0.300	0.300	07/25/2022	ND					

Surrogate: 4-Bromofluorobenzene (PID *103 %* *69.9-140*

Chloride, SM4500Cl-B mg/kg Analyzed By: GM

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**80.0**	16.0	07/25/2022	ND	432	108	400	0.00	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	07/25/2022	ND	190	94.9	200	0.511	
DRO >C10-C28*	<10.0	10.0	07/25/2022	ND	202	101	200	2.04	
EXT DRO >C28-C36	<10.0	10.0	07/25/2022	ND					

Surrogate: 1-Chlorooctane *76.5 %* *43-149*

Surrogate: 1-Chlorooctadecane *85.5 %* *42.5-161*

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Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

TERRACON CONSULTANTS
JOSEPH GUESNIER
5827 50TH ST. SUITE 1
LUBBOCK TX, 79424
Fax To:

Received:	07/21/2022	Sampling Date:	07/20/2022
Reported:	07/26/2022	Sampling Type:	Soil
Project Name:	AIKMAN SWD	Sampling Condition:	Cool & Intact
Project Number:	AR207018	Sample Received By:	Tamara Oldaker
Project Location:	SPUR ENERGY		

Sample ID: W - 1.1 (2-3) (H223190-13)

BTEX 8021B mg/kg Analyzed By: JH/

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	07/25/2022	ND	2.10	105	2.00	1.50	
Toluene*	<0.050	0.050	07/25/2022	ND	2.16	108	2.00	1.18	
Ethylbenzene*	<0.050	0.050	07/25/2022	ND	2.18	109	2.00	1.13	
Total Xylenes*	<0.150	0.150	07/25/2022	ND	6.64	111	6.00	1.64	
Total BTEX	<0.300	0.300	07/25/2022	ND					

Surrogate: 4-Bromofluorobenzene (PID *104 %* *69.9-140*

Chloride, SM4500Cl-B mg/kg Analyzed By: GM

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**96.0**	16.0	07/25/2022	ND	432	108	400	0.00	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	07/25/2022	ND	190	94.9	200	0.511	
DRO >C10-C28*	<10.0	10.0	07/25/2022	ND	202	101	200	2.04	
EXT DRO >C28-C36	<10.0	10.0	07/25/2022	ND					

Surrogate: 1-Chlorooctane *73.7 %* *43-149*

Surrogate: 1-Chlorooctadecane *82.9 %* *42.5-161*

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Analytical Results For:

TERRACON CONSULTANTS
JOSEPH GUESNIER
5827 50TH ST. SUITE 1
LUBBOCK TX, 79424
Fax To:

Received:	07/21/2022	Sampling Date:	07/20/2022
Reported:	07/26/2022	Sampling Type:	Soil
Project Name:	AIKMAN SWD	Sampling Condition:	Cool & Intact
Project Number:	AR207018	Sample Received By:	Tamara Oldaker
Project Location:	SPUR ENERGY		

Sample ID: W - 2.1 (2-3) (H223190-14)

BTEX 8021B mg/kg Analyzed By: JH/

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	07/25/2022	ND	2.10	105	2.00	1.50	
Toluene*	<0.050	0.050	07/25/2022	ND	2.16	108	2.00	1.18	
Ethylbenzene*	<0.050	0.050	07/25/2022	ND	2.18	109	2.00	1.13	
Total Xylenes*	<0.150	0.150	07/25/2022	ND	6.64	111	6.00	1.64	
Total BTEX	<0.300	0.300	07/25/2022	ND					

Surrogate: 4-Bromofluorobenzene (PID *104 %* *69.9-140*

Chloride, SM4500Cl-B mg/kg Analyzed By: GM

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**96.0**	16.0	07/25/2022	ND	432	108	400	0.00	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	07/25/2022	ND	190	94.9	200	0.511	
DRO >C10-C28*	<10.0	10.0	07/25/2022	ND	202	101	200	2.04	
EXT DRO >C28-C36	<10.0	10.0	07/25/2022	ND					

Surrogate: 1-Chlorooctane *76.5 %* *43-149*

Surrogate: 1-Chlorooctadecane *85.5 %* *42.5-161*

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Analytical Results For:

TERRACON CONSULTANTS
JOSEPH GUESNIER
5827 50TH ST. SUITE 1
LUBBOCK TX, 79424
Fax To:

Received:	07/21/2022	Sampling Date:	07/20/2022
Reported:	07/26/2022	Sampling Type:	Soil
Project Name:	AIKMAN SWD	Sampling Condition:	Cool & Intact
Project Number:	AR207018	Sample Received By:	Tamara Oldaker
Project Location:	SPUR ENERGY		

Sample ID: E - 1.1 (2-3) (H223190-15)

BTEX 8021B mg/kg Analyzed By: JH/

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	07/25/2022	ND	2.10	105	2.00	1.50	
Toluene*	<0.050	0.050	07/25/2022	ND	2.16	108	2.00	1.18	
Ethylbenzene*	<0.050	0.050	07/25/2022	ND	2.18	109	2.00	1.13	
Total Xylenes*	<0.150	0.150	07/25/2022	ND	6.64	111	6.00	1.64	
Total BTEX	<0.300	0.300	07/25/2022	ND					

Surrogate: 4-Bromofluorobenzene (PID *105 %* *69.9-140*

Chloride, SM4500Cl-B mg/kg Analyzed By: GM

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**128**	16.0	07/25/2022	ND	432	108	400	0.00	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	07/25/2022	ND	190	94.9	200	0.511	
DRO >C10-C28*	<10.0	10.0	07/25/2022	ND	202	101	200	2.04	
EXT DRO >C28-C36	<10.0	10.0	07/25/2022	ND					

Surrogate: 1-Chlorooctane *69.4 %* *43-149*

Surrogate: 1-Chlorooctadecane *75.7 %* *42.5-161*

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Analytical Results For:

TERRACON CONSULTANTS
JOSEPH GUESNIER
5827 50TH ST. SUITE 1
LUBBOCK TX, 79424
Fax To:

Received:	07/21/2022	Sampling Date:	07/20/2022
Reported:	07/26/2022	Sampling Type:	Soil
Project Name:	AIKMAN SWD	Sampling Condition:	Cool & Intact
Project Number:	AR207018	Sample Received By:	Tamara Oldaker
Project Location:	SPUR ENERGY		

Sample ID: E - 2.1 (2-3) (H223190-16)

BTEX 8021B mg/kg Analyzed By: JH/

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	07/25/2022	ND	2.10	105	2.00	1.50	
Toluene*	**0.064**	0.050	07/25/2022	ND	2.16	108	2.00	1.18	
Ethylbenzene*	<0.050	0.050	07/25/2022	ND	2.18	109	2.00	1.13	
Total Xylenes*	<0.150	0.150	07/25/2022	ND	6.64	111	6.00	1.64	
Total BTEX	<0.300	0.300	07/25/2022	ND					

Surrogate: 4-Bromofluorobenzene (PID *106 %* *69.9-140*

Chloride, SM4500Cl-B mg/kg Analyzed By: GM

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**48.0**	16.0	07/25/2022	ND	432	108	400	0.00	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	07/25/2022	ND	190	94.9	200	0.511	
DRO >C10-C28*	**256**	10.0	07/25/2022	ND	202	101	200	2.04	
EXT DRO >C28-C36	<10.0	10.0	07/25/2022	ND					

Surrogate: 1-Chlorooctane *75.8 %* *43-149*

Surrogate: 1-Chlorooctadecane *85.1 %* *42.5-161*

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Analytical Results For:

TERRACON CONSULTANTS
JOSEPH GUESNIER
5827 50TH ST. SUITE 1
LUBBOCK TX, 79424
Fax To:

Received:	07/21/2022	Sampling Date:	07/20/2022
Reported:	07/26/2022	Sampling Type:	Soil
Project Name:	AIKMAN SWD	Sampling Condition:	Cool & Intact
Project Number:	AR207018	Sample Received By:	Tamara Oldaker
Project Location:	SPUR ENERGY		

Sample ID: TN - 1.1 (1-2) (H223190-17)

BTEX 8021B mg/kg Analyzed By: JH/

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	07/25/2022	ND	2.10	105	2.00	1.50	
Toluene*	**0.063**	0.050	07/25/2022	ND	2.16	108	2.00	1.18	
Ethylbenzene*	<0.050	0.050	07/25/2022	ND	2.18	109	2.00	1.13	
Total Xylenes*	<0.150	0.150	07/25/2022	ND	6.64	111	6.00	1.64	
Total BTEX	<0.300	0.300	07/25/2022	ND					

Surrogate: 4-Bromofluorobenzene (PID *105 %* *69.9-140*

Chloride, SM4500Cl-B mg/kg Analyzed By: GM

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**48.0**	16.0	07/25/2022	ND	432	108	400	0.00	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	07/25/2022	ND	190	94.9	200	0.511	
DRO >C10-C28*	**285**	10.0	07/25/2022	ND	202	101	200	2.04	
EXT DRO >C28-C36	<10.0	10.0	07/25/2022	ND					

Surrogate: 1-Chlorooctane *81.0 %* *43-149*

Surrogate: 1-Chlorooctadecane *92.3 %* *42.5-161*

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Analytical Results For:

TERRACON CONSULTANTS
JOSEPH GUESNIER
5827 50TH ST. SUITE 1
LUBBOCK TX, 79424
Fax To:

Received:	07/21/2022	Sampling Date:	07/20/2022
Reported:	07/26/2022	Sampling Type:	Soil
Project Name:	AIKMAN SWD	Sampling Condition:	Cool & Intact
Project Number:	AR207018	Sample Received By:	Tamara Oldaker
Project Location:	SPUR ENERGY		

Sample ID: TN - 2.1 (1-2) (H223190-18)

BTEX 8021B mg/kg Analyzed By: JH/

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	**0.056**	0.050	07/25/2022	ND	2.10	105	2.00	1.50	
Toluene*	**0.417**	0.050	07/25/2022	ND	2.16	108	2.00	1.18	
Ethylbenzene*	<0.050	0.050	07/25/2022	ND	2.18	109	2.00	1.13	
Total Xylenes*	**0.553**	0.150	07/25/2022	ND	6.64	111	6.00	1.64	
Total BTEX	**1.03**	0.300	07/25/2022	ND					

Surrogate: 4-Bromofluorobenzene (PID *109 %* *69.9-140*

Chloride, SM4500Cl-B mg/kg Analyzed By: GM

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**32.0**	16.0	07/25/2022	ND	432	108	400	0.00	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	**13.4**	10.0	07/25/2022	ND	190	94.9	200	0.511	
DRO >C10-C28*	**327**	10.0	07/25/2022	ND	202	101	200	2.04	
EXT DRO >C28-C36	<10.0	10.0	07/25/2022	ND					

Surrogate: 1-Chlorooctane *70.4 %* *43-149*

Surrogate: 1-Chlorooctadecane *75.4 %* *42.5-161*

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Analytical Results For:

TERRACON CONSULTANTS
JOSEPH GUESNIER
5827 50TH ST. SUITE 1
LUBBOCK TX, 79424
Fax To:

Received:	07/21/2022	Sampling Date:	07/20/2022
Reported:	07/26/2022	Sampling Type:	Soil
Project Name:	AIKMAN SWD	Sampling Condition:	Cool & Intact
Project Number:	AR207018	Sample Received By:	Tamara Oldaker
Project Location:	SPUR ENERGY		

Sample ID: TS - 1.1 (1-2) (H223190-20)

BTEX 8021B mg/kg Analyzed By: JH/

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	07/25/2022	ND	2.10	105	2.00	1.50	
Toluene*	<0.050	0.050	07/25/2022	ND	2.16	108	2.00	1.18	
Ethylbenzene*	<0.050	0.050	07/25/2022	ND	2.18	109	2.00	1.13	
Total Xylenes*	<0.150	0.150	07/25/2022	ND	6.64	111	6.00	1.64	
Total BTEX	<0.300	0.300	07/25/2022	ND					

Surrogate: 4-Bromofluorobenzene (PID *106 %* *69.9-140*

Chloride, SM4500Cl-B mg/kg Analyzed By: GM

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**48.0**	16.0	07/25/2022	ND	432	108	400	0.00	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	07/25/2022	ND	190	94.9	200	0.511	
DRO >C10-C28*	**12.6**	10.0	07/25/2022	ND	202	101	200	2.04	
EXT DRO >C28-C36	<10.0	10.0	07/25/2022	ND					

Surrogate: 1-Chlorooctane *71.7 %* *43-149*

Surrogate: 1-Chlorooctadecane *78.6 %* *42.5-161*

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Analytical Results For:

TERRACON CONSULTANTS
JOSEPH GUESNIER
5827 50TH ST. SUITE 1
LUBBOCK TX, 79424
Fax To:

Received:	07/21/2022	Sampling Date:	07/20/2022
Reported:	07/26/2022	Sampling Type:	Soil
Project Name:	AIKMAN SWD	Sampling Condition:	Cool & Intact
Project Number:	AR207018	Sample Received By:	Tamara Oldaker
Project Location:	SPUR ENERGY		

Sample ID: TS - 2.1 (1-2) (H223190-21)

BTEX 8021B mg/kg Analyzed By: JH/

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	07/25/2022	ND	2.10	105	2.00	1.50	
Toluene*	**0.283**	0.050	07/25/2022	ND	2.16	108	2.00	1.18	
Ethylbenzene*	<0.050	0.050	07/25/2022	ND	2.18	109	2.00	1.13	
Total Xylenes*	**0.378**	0.150	07/25/2022	ND	6.64	111	6.00	1.64	
Total BTEX	**0.661**	0.300	07/25/2022	ND					

Surrogate: 4-Bromofluorobenzene (PID *105 %* *69.9-140*

Chloride, SM4500Cl-B mg/kg Analyzed By: GM

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**48.0**	16.0	07/25/2022	ND	432	108	400	0.00	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	**11.6**	10.0	07/25/2022	ND	190	94.9	200	0.511	
DRO >C10-C28*	**264**	10.0	07/25/2022	ND	202	101	200	2.04	
EXT DRO >C28-C36	<10.0	10.0	07/25/2022	ND					

Surrogate: 1-Chlorooctane *74.6 %* *43-149*

Surrogate: 1-Chlorooctadecane *81.0 %* *42.5-161*

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Notes and Definitions

QM-07	The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.
ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C
	Samples reported on an as received basis (wet) unless otherwise noted on report

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Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

101 East Marland, Hobbs, NM 88240
(575) 393-2326 FAX (575) 393-2476

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Company Name:	Terracon	**BILL TO** P.O. #:	
Project Manager:	Joseph Guesnier	Company:	Spur
Address:		Attn:	Brandy Moulder
City:	State: Zip:	Address:	
Phone #:	806-544-9276 Fax #:	City:	
Project #:	AR2007018 Project Owner:	State: Zip:	
Project Name:	Aikman	Phone #:	
Project Location:		Fax #:	
Sampler Name:			

ANALYSIS REQUEST: Chlorides (4500) | BTEX (8021B) | TPH Ext (8015)

FOR LAB USE ONLY Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX: GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER :	PRESERV.: ACID/BASE:	ICE / COOL	OTHER :	SAMPLING: DATE	TIME	Chlorides (4500)	BTEX (8021B)	TPH Ext (8015)
H223190																	
1	CS-7.1 (6-7)	C	1			X							7-20-22	14:00	X	X	X
2	CS-6.1 (6-7)	C	1			X								14:05	X	X	X
3	CS-9.1 (6-7)	C	1			X								14:10	X	X	X
4	CS-10.1 (6-7)	C	1			X								14:15	X	X	X
5	CS-25.1 (6-7)	C	1			X								14:20	X	X	X
6	CS-31.1 (6-7)	C	1			X								14:25	X	X	X
7	N-1.1 (2-3)	C	1			X								14:30	X	X	X
8	N-2.1 (2-3)	C	1			X								14:35	X	X	X
9	N-5.1 (2-3)	C	1			X								14:40	X	X	X
10	N-7.1 (2-3)	C	1			X								14:45	X	X	X

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Relinquished By:	Date: 7-20-22	Received By:	Verbal Result: ☐ Yes ☐ No Add'l Phone #:
	Time: 10:19	Tamara Oldaker	All Results are emailed. Please provide Email address:
Relinquished By:	Date:	Received By:	REMARKS:
	Time:		

Delivered By: (Circle One)	Observed Temp. °C 0.1°	Sample Condition: Cool ☐ Yes ☐ No; Intact ☑ Yes ☐ No	CHECKED BY: (Initials) TO.	Turnaround Time: Standard ☑ Rush ☐
Sampler - UPS - Bus - Other:	Corrected Temp. °C -0.5° ~~-0.7°~~			Thermometer ID #113 Correction Factor -0.5°C TO. 7/21/22

Bacteria (only) Sample Condition: Cool ☐ Yes ☐ No; Intact ☐ Yes ☐ No; Observed Temp. °C; Corrected Temp. °C

FORM-006 R 3.2 10/07/21

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SR 7.21.22

Received by OCD: 4/10/2023 1:07:45 PM

Released to Imaging: 8/29/2023 1:29:02 PM

CARDINAL Laboratories

101 East Marland, Hobbs, NM 88240
(575) 393-2326 FAX (575) 393-2476

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Company Name: Tercon
Project Manager: Joseph Guenier
Address:
City: State: Zip:
Phone #: 806-544-9276 Fax #:
Project #: AR2207018 Project Owner:
Project Name:
Project Location: Aikman
Sampler Name:

BILL TO
P.O. #:
Company: SPL
Attn: Brady Mauldin
Address:
City:
State: Zip:
Phone #:
Fax #:

ANALYSIS REQUEST

FOR LAB USE ONLY

Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX: GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER :	PRESERV.: ACID/BASE:	ICE / COOL	OTHER :	SAMPLING: DATE	TIME	Chloride (4500)	BTEX (8021B)	TPH EXT (8015)
H223190																	
11	S-1.1 (2-3)	C	1			X							7-20-22	19:50	X	X	X
12	S-2.1 (2-3)	C	1			X								19:55	X	X	X
13	W-1.1 (2-3)	C	1			X								20:00	X	X	X
14	W-2.1 (2-3)	C	1			X								20:05	X	X	X
15	E-1.1 (2-3)	C	1			X								20:10	X	X	X
16	E-2.1 (2-3)	C	1			X								20:15	X	X	X
17	TN-1.1 (1-2)	C	1			X								20:20	X	X	X
18	TN-2.1 (1-2)	C	1			X								20:25	X	X	X
19	~~TE-1.1 (1-2)~~	~~C~~	~~1~~			~~X~~								20:30	X	X	X
20	TS-1.1 (1-2)	C	1			X								20:35	X	X	X

NO SAMPLE T.O. 7/21/22

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Relinquished By: Date: 7-21-22 Time: 10:19 Received By:
Relinquished By: Date: Time: Received By:

Verbal Result: ☐ Yes ☐ No Add'l Phone #:
All Results are emailed. Please provide Email address:
REMARKS:

Delivered By: (Circle One)
Sampler - UPS - Bus - Other:
Observed Temp. °C 0.1° Corrected Temp. °C -0.5° -0.7°
Sample Condition: Cool ☐ Yes ☐ No Intact ☑ Yes ☐ No
CHECKED BY: (Initials) T.O.

Turnaround Time: Standard ☑ Rush ☐
Thermometer ID #113 Correction Factor -0.5°C
Bacteria (only) Sample Condition: Cool ☐ Yes ☐ No Intact ☐ Yes ☐ No
Observed Temp. °C Corrected Temp. °C
T.O. 7/21/22

FORM-006 R 3.2 10/07/21

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SR 8/29/23

Received by OCD: 4/10/2023 1:07:45 PM

Released to Imaging: 8/29/2023 1:29:02 PM

CARDINAL Laboratories

101 East Marland, Hobbs, NM 88240
(575) 393-2326 FAX (575) 393-2476

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Company Name:	Terracon	**BILL TO** P.O. #:	
Project Manager:	Joseph Guelnier	Company:	Shur
Address:		Attn:	Brady Mauldin
City:	State: Zip:	Address:	
Phone #:	806-544-9276 Fax #:	City:	
Project #:	AR207018 Project Owner:	State: Zip:	
Project Name:	Aikman	Phone #:	
Project Location:		Fax #:	
Sampler Name:			

FOR LAB USE ONLY				MATRIX						PRESERV.			SAMPLING		ANALYSIS REQUEST											
Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER :	ACID/BASE:	ICE / COOL	OTHER :	DATE	TIME	Chloride (4500)	BTEX (8021B)	TPH Ext (8015)									
H223190																										
21	TS-2.1 (1-2)	C	1			✓							7-20-22	2040	X	X	X									

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Relinquished By:	Date: 7-21-22	Received By:	Verbal Result: ☐ Yes ☐ No Add'l Phone #:
	Time: 10:20		All Results are emailed. Please provide Email address:
Relinquished By:	Date:	Received By:	REMARKS:
	Time:		

Delivered By: (Circle One)	Observed Temp. °C 0.1	Sample Condition	CHECKED BY:	Turnaround Time: Standard ☑ Rush ☐
Sampler - UPS - Bus - Other:	Corrected Temp. °C -0.5 -0.7	Cool ☐ Yes ☑ Yes ☐ No ☐ No Intact	(Initials) TO	Thermometer ID #113 Correction Factor -0.5°C

Bacteria (only) Sample Condition: Cool ☐ Yes ☐ No Intact ☐ Yes ☐ No — Observed Temp. °C — Corrected Temp. °C

T-7/21/22

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SR 7-21-22

Received by OCD: 4/10/2023 1:07:45 PM

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ANALYTICAL REPORT

Eurofins Carlsbad
1089 N Canal St.
Carlsbad, NM 88220
Tel: (575)988-3199

Laboratory Job ID: 890-3191-1
Client Project/Site: Aikman State #001

For:
Terracon Consulting Eng & Scientists
5847 50th St
Lubbock, Texas 79424

Attn: Mike Adams

JKramer

Authorized for release by:
10/17/2022 3:08:08 PM

Jessica Kramer, Project Manager
(432)704-5440
Jessica.Kramer@et.eurofinsus.com

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This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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

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

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

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

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

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

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

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

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



Jessica Kramer
Project Manager
10/17/2022 3:08:08 PM

Client: Terracon Consulting Eng & Scientists
Project/Site: Aikman State #001

Laboratory Job ID: 890-3191-1

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Definitions/Glossary

Client: Terracon Consulting Eng & Scientists Job ID: 890-3191-1
Project/Site: Aikman State #001

Qualifiers

GC VOA

Qualifier	Qualifier Description
F1	MS and/or MSD recovery exceeds control limits.
F2	MS/MSD RPD exceeds control limits
S1-	Surrogate recovery exceeds control limits, low biased.
S1+	Surrogate recovery exceeds control limits, high biased.
U	Indicates the analyte was analyzed for but not detected.

GC Semi VOA

Qualifier	Qualifier Description
*1	LCS/LCSD RPD exceeds control limits.
S1+	Surrogate recovery exceeds control limits, high biased.
U	Indicates the analyte was analyzed for but not detected.

HPLC/IC

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.

Glossary

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

Case Narrative

Client: Terracon Consulting Eng & Scientists
Project/Site: Aikman State #001

Job ID: 890-3191-1

Job ID: 890-3191-1

Laboratory: Eurofins Carlsbad

Narrative

Job Narrative
890-3191-1

Receipt
The samples were received on 10/10/2022 3:58 PM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 2.2°C

Receipt Exceptions
The following samples were received and analyzed from an unpreserved bulk soil jar: N-SW (890-3191-1), E-SW (890-3191-2), S-SW (890-3191-3), W-SW (890-3191-4), FS01 (890-3191-5), FS02 (890-3191-6), FS03 (890-3191-7), FS04 (890-3191-8), FS05 (890-3191-9), FS06 (890-3191-10), FS07 (890-3191-11), FS08 (890-3191-12), FS09 (890-3191-13), FS10 (890-3191-14), FS11 (890-3191-15), FS12 (890-3191-16), FS13 (890-3191-17) and FS14 (890-3191-18).

GC VOA
Method 8021B: The matrix spike duplicate (MSD) recoveries for preparation batch 880-36982 and analytical batch 880-37017 were outside control limits. Non-homogeneity is suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

Method 8021B: Surrogate recovery for the following sample was outside control limits: FS01 (890-3191-5). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8021B: Surrogate recovery for the following sample was outside control limits: FS05 (890-3191-9). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8021B: Surrogate recovery for the following sample was outside control limits: FS11 (890-3191-15). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8021B: Surrogate recovery for the following samples were outside control limits: FS09 (890-3191-13) and FS12 (890-3191-16). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

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

GC Semi VOA
Method 8015MOD_NM: Surrogate recovery for the following sample was outside control limits: FS02 (890-3191-6). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8015MOD_NM: The RPD of the laboratory control sample (LCS) and laboratory control sample duplicate (LCSD) for preparation batch 880-36769 and analytical batch 880-36709 recovered outside control limits for the following analytes: Gasoline Range Organics (GRO)-C6-C10.

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

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

Client Sample Results

Client: Terracon Consulting Eng & Scientists
Job ID: 890-3191-1
Project/Site: Aikman State #001

Client Sample ID: N-SW
Lab Sample ID: 890-3191-1
Date Collected: 10/10/22 11:50
Matrix: Solid
Date Received: 10/10/22 15:58
Sample Depth: 2'

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.0200	U	0.0200		mg/Kg		10/17/22 08:52	10/17/22 13:50	10
Toluene	<0.0200	U	0.0200		mg/Kg		10/17/22 08:52	10/17/22 13:50	10
Ethylbenzene	<0.0200	U	0.0200		mg/Kg		10/17/22 08:52	10/17/22 13:50	10
m-Xylene & p-Xylene	<0.0399	U	0.0399		mg/Kg		10/17/22 08:52	10/17/22 13:50	10
o-Xylene	<0.0200	U	0.0200		mg/Kg		10/17/22 08:52	10/17/22 13:50	10
Xylenes, Total	<0.0399	U	0.0399		mg/Kg		10/17/22 08:52	10/17/22 13:50	10

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*89*		*70 - 130*	*10/17/22 08:52*	*10/17/22 13:50*	*10*
1,4-Difluorobenzene (Surr)	*72*		*70 - 130*	*10/17/22 08:52*	*10/17/22 13:50*	*10*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.0399	U	0.0399		mg/Kg			10/17/22 12:04	1

Method: SW846 8015 NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.8	U	49.8		mg/Kg			10/13/22 11:39	1

Method: SW846 8015B NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.8	U *1	49.8		mg/Kg		10/12/22 15:33	10/12/22 22:16	1
Diesel Range Organics (Over C10-C28)	<49.8	U	49.8		mg/Kg		10/12/22 15:33	10/12/22 22:16	1
OII Range Organics (Over C28-C36)	<49.8	U	49.8		mg/Kg		10/12/22 15:33	10/12/22 22:16	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*104*		*70 - 130*	*10/12/22 15:33*	*10/12/22 22:16*	*1*
o-Terphenyl	*114*		*70 - 130*	*10/12/22 15:33*	*10/12/22 22:16*	*1*

Method: MCAWW 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**40.3**		5.02		mg/Kg			10/14/22 12:39	1

Client Sample ID: E-SW
Lab Sample ID: 890-3191-2
Date Collected: 10/10/22 11:52
Matrix: Solid
Date Received: 10/10/22 15:58
Sample Depth: 2'

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		10/14/22 14:55	10/16/22 07:03	1
Toluene	<0.00199	U	0.00199		mg/Kg		10/14/22 14:55	10/16/22 07:03	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		10/14/22 14:55	10/16/22 07:03	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		10/14/22 14:55	10/16/22 07:03	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		10/14/22 14:55	10/16/22 07:03	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		10/14/22 14:55	10/16/22 07:03	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*129*		*70 - 130*	*10/14/22 14:55*	*10/16/22 07:03*	*1*

Client Sample Results

Client: Terracon Consulting Eng & Scientists
Project/Site: Aikman State #001

Job ID: 890-3191-1

Client Sample ID: E-SW

Lab Sample ID: 890-3191-2
Matrix: Solid
Date Collected: 10/10/22 11:52
Date Received: 10/10/22 15:58
Sample Depth: 2'

Method: SW846 8021B - Volatile Organic Compounds (GC) (Continued)

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Difluorobenzene (Surr)	*91*		*70 - 130*	*10/14/22 14:55*	*10/16/22 07:03*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398		mg/Kg			10/17/22 12:04	1

Method: SW846 8015 NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9		mg/Kg			10/13/22 11:39	1

Method: SW846 8015B NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U *1	49.9		mg/Kg		10/12/22 15:33	10/12/22 23:21	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		10/12/22 15:33	10/12/22 23:21	1
OII Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		10/12/22 15:33	10/12/22 23:21	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*95*		*70 - 130*	*10/12/22 15:33*	*10/12/22 23:21*	*1*
o-Terphenyl	*107*		*70 - 130*	*10/12/22 15:33*	*10/12/22 23:21*	*1*

Method: MCAWW 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**107**		5.00		mg/Kg			10/14/22 12:53	1

Client Sample ID: S-SW

Lab Sample ID: 890-3191-3
Matrix: Solid
Date Collected: 10/10/22 11:54
Date Received: 10/10/22 15:58
Sample Depth: 2'

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		10/14/22 14:55	10/16/22 07:23	1
Toluene	<0.00200	U	0.00200		mg/Kg		10/14/22 14:55	10/16/22 07:23	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		10/14/22 14:55	10/16/22 07:23	1
m-Xylene & p-Xylene	<0.00399	U	0.00399		mg/Kg		10/14/22 14:55	10/16/22 07:23	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		10/14/22 14:55	10/16/22 07:23	1
Xylenes, Total	<0.00399	U	0.00399		mg/Kg		10/14/22 14:55	10/16/22 07:23	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*71*		*70 - 130*	*10/14/22 14:55*	*10/16/22 07:23*	*1*
1,4-Difluorobenzene (Surr)	*73*		*70 - 130*	*10/14/22 14:55*	*10/16/22 07:23*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00399	U	0.00399		mg/Kg			10/17/22 12:04	1

Method: SW846 8015 NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.8	U	49.8		mg/Kg			10/13/22 11:39	1

Client Sample Results

Client: Terracon Consulting Eng & Scientists
Job ID: 890-3191-1
Project/Site: Aikman State #001

Client Sample ID: S-SW
Lab Sample ID: 890-3191-3
Date Collected: 10/10/22 11:54
Matrix: Solid
Date Received: 10/10/22 15:58
Sample Depth: 2'

Method: SW846 8015B NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.8	U *1	49.8		mg/Kg		10/12/22 15:33	10/12/22 23:43	1
Diesel Range Organics (Over C10-C28)	<49.8	U	49.8		mg/Kg		10/12/22 15:33	10/12/22 23:43	1
OII Range Organics (Over C28-C36)	<49.8	U	49.8		mg/Kg		10/12/22 15:33	10/12/22 23:43	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*98*		*70 - 130*	*10/12/22 15:33*	*10/12/22 23:43*	*1*
o-Terphenyl	*111*		*70 - 130*	*10/12/22 15:33*	*10/12/22 23:43*	*1*

Method: MCAWW 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**540**		4.98		mg/Kg			10/14/22 12:58	1

Client Sample ID: W-SW
Lab Sample ID: 890-3191-4
Date Collected: 10/10/22 11:56
Matrix: Solid
Date Received: 10/10/22 15:58
Sample Depth: 2'

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.0201	U	0.0201		mg/Kg		10/17/22 08:52	10/17/22 14:10	10
Toluene	<0.0201	U	0.0201		mg/Kg		10/17/22 08:52	10/17/22 14:10	10
Ethylbenzene	<0.0201	U	0.0201		mg/Kg		10/17/22 08:52	10/17/22 14:10	10
m-Xylene & p-Xylene	<0.0402	U	0.0402		mg/Kg		10/17/22 08:52	10/17/22 14:10	10
o-Xylene	**0.0209**		0.0201		mg/Kg		10/17/22 08:52	10/17/22 14:10	10
Xylenes, Total	<0.0402	U	0.0402		mg/Kg		10/17/22 08:52	10/17/22 14:10	10

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*77*		*70 - 130*	*10/17/22 08:52*	*10/17/22 14:10*	*10*
1,4-Difluorobenzene (Surr)	*77*		*70 - 130*	*10/17/22 08:52*	*10/17/22 14:10*	*10*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.0402	U	0.0402		mg/Kg			10/17/22 12:04	1

Method: SW846 8015 NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9		mg/Kg			10/13/22 11:39	1

Method: SW846 8015B NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U *1	49.9		mg/Kg		10/12/22 15:33	10/13/22 00:04	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		10/12/22 15:33	10/13/22 00:04	1
OII Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		10/12/22 15:33	10/13/22 00:04	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*97*		*70 - 130*	*10/12/22 15:33*	*10/13/22 00:04*	*1*
o-Terphenyl	*111*		*70 - 130*	*10/12/22 15:33*	*10/13/22 00:04*	*1*

Client Sample Results

Client: Terracon Consulting Eng & Scientists
Project/Site: Aikman State #001

Job ID: 890-3191-1

Client Sample ID: W-SW

Lab Sample ID: 890-3191-4
Matrix: Solid
Date Collected: 10/10/22 11:56
Date Received: 10/10/22 15:58
Sample Depth: 2'

Method: MCAWW 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**185**		5.00		mg/Kg			10/14/22 13:03	1

Client Sample ID: FS01

Lab Sample ID: 890-3191-5
Matrix: Solid
Date Collected: 10/10/22 11:58
Date Received: 10/10/22 15:58
Sample Depth: 2'

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00201	U	0.00201		mg/Kg		10/14/22 14:55	10/16/22 08:05	1
Toluene	<0.00201	U	0.00201		mg/Kg		10/14/22 14:55	10/16/22 08:05	1
Ethylbenzene	**0.00451**		0.00201		mg/Kg		10/14/22 14:55	10/16/22 08:05	1
m-Xylene & p-Xylene	<0.00402	U	0.00402		mg/Kg		10/14/22 14:55	10/16/22 08:05	1
o-Xylene	<0.00201	U	0.00201		mg/Kg		10/14/22 14:55	10/16/22 08:05	1
Xylenes, Total	<0.00402	U	0.00402		mg/Kg		10/14/22 14:55	10/16/22 08:05	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*104*		*70 - 130*	*10/14/22 14:55*	*10/16/22 08:05*	*1*
1,4-Difluorobenzene (Surr)	*65*	*S1-*	*70 - 130*	*10/14/22 14:55*	*10/16/22 08:05*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	**0.00451**		0.00402		mg/Kg			10/17/22 12:04	1

Method: SW846 8015 NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.8	U	49.8		mg/Kg			10/13/22 11:39	1

Method: SW846 8015B NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.8	U *1	49.8		mg/Kg		10/12/22 15:33	10/13/22 00:25	1
Diesel Range Organics (Over C10-C28)	<49.8	U	49.8		mg/Kg		10/12/22 15:33	10/13/22 00:25	1
OII Range Organics (Over C28-C36)	<49.8	U	49.8		mg/Kg		10/12/22 15:33	10/13/22 00:25	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*100*		*70 - 130*	*10/12/22 15:33*	*10/13/22 00:25*	*1*
o-Terphenyl	*115*		*70 - 130*	*10/12/22 15:33*	*10/13/22 00:25*	*1*

Method: MCAWW 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**189**		4.99		mg/Kg			10/14/22 13:08	1

Client Sample Results

Client: Terracon Consulting Eng & Scientists
Project/Site: Aikman State #001

Job ID: 890-3191-1

Client Sample ID: FS02

Lab Sample ID: 890-3191-6
Matrix: Solid
Date Collected: 10/10/22 12:00
Date Received: 10/10/22 15:58
Sample Depth: 2'

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		10/14/22 14:55	10/16/22 08:25	1
Toluene	<0.00200	U	0.00200		mg/Kg		10/14/22 14:55	10/16/22 08:25	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		10/14/22 14:55	10/16/22 08:25	1
m-Xylene & p-Xylene	<0.00399	U	0.00399		mg/Kg		10/14/22 14:55	10/16/22 08:25	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		10/14/22 14:55	10/16/22 08:25	1
Xylenes, Total	<0.00399	U	0.00399		mg/Kg		10/14/22 14:55	10/16/22 08:25	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*116*		*70 - 130*	*10/14/22 14:55*	*10/16/22 08:25*	*1*
1,4-Difluorobenzene (Surr)	*109*		*70 - 130*	*10/14/22 14:55*	*10/16/22 08:25*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00399	U	0.00399		mg/Kg			10/17/22 12:04	1

Method: SW846 8015 NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9		mg/Kg			10/13/22 11:39	1

Method: SW846 8015B NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U *1	49.9		mg/Kg		10/12/22 15:33	10/13/22 00:46	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		10/12/22 15:33	10/13/22 00:46	1
OII Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		10/12/22 15:33	10/13/22 00:46	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*116*		*70 - 130*	*10/12/22 15:33*	*10/13/22 00:46*	*1*
o-Terphenyl	*131*	*S1+*	*70 - 130*	*10/12/22 15:33*	*10/13/22 00:46*	*1*

Method: MCAWW 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**1290**		25.2		mg/Kg			10/14/22 13:28	5

Client Sample ID: FS03

Lab Sample ID: 890-3191-7
Matrix: Solid
Date Collected: 10/10/22 12:02
Date Received: 10/10/22 15:58
Sample Depth: 2'

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		10/14/22 14:55	10/16/22 08:46	1
Toluene	**0.00218**		0.00199		mg/Kg		10/14/22 14:55	10/16/22 08:46	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		10/14/22 14:55	10/16/22 08:46	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		10/14/22 14:55	10/16/22 08:46	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		10/14/22 14:55	10/16/22 08:46	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		10/14/22 14:55	10/16/22 08:46	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*109*		*70 - 130*	*10/14/22 14:55*	*10/16/22 08:46*	*1*

Eurofins Carlsbad

Client Sample Results

Client: Terracon Consulting Eng & Scientists
Project/Site: Aikman State #001

Job ID: 890-3191-1

Client Sample ID: FS03

Lab Sample ID: 890-3191-7
Matrix: Solid
Date Collected: 10/10/22 12:02
Date Received: 10/10/22 15:58
Sample Depth: 2'

Method: SW846 8021B - Volatile Organic Compounds (GC) (Continued)

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Difluorobenzene (Surr)	*112*		*70 - 130*	*10/14/22 14:55*	*10/16/22 08:46*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398		mg/Kg			10/17/22 12:04	1

Method: SW846 8015 NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0		mg/Kg			10/13/22 11:39	1

Method: SW846 8015B NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U *1	50.0		mg/Kg		10/12/22 15:33	10/13/22 01:07	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		10/12/22 15:33	10/13/22 01:07	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		10/12/22 15:33	10/13/22 01:07	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*98*		*70 - 130*	*10/12/22 15:33*	*10/13/22 01:07*	*1*
o-Terphenyl	*113*		*70 - 130*	*10/12/22 15:33*	*10/13/22 01:07*	*1*

Method: MCAWW 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**424**		4.97		mg/Kg			10/14/22 13:33	1

Client Sample ID: FS04

Lab Sample ID: 890-3191-8
Matrix: Solid
Date Collected: 10/10/22 12:04
Date Received: 10/10/22 15:58
Sample Depth: 2'

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		10/14/22 14:55	10/16/22 09:07	1
Toluene	<0.00200	U	0.00200		mg/Kg		10/14/22 14:55	10/16/22 09:07	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		10/14/22 14:55	10/16/22 09:07	1
m-Xylene & p-Xylene	<0.00401	U	0.00401		mg/Kg		10/14/22 14:55	10/16/22 09:07	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		10/14/22 14:55	10/16/22 09:07	1
Xylenes, Total	<0.00401	U	0.00401		mg/Kg		10/14/22 14:55	10/16/22 09:07	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*116*		*70 - 130*	*10/14/22 14:55*	*10/16/22 09:07*	*1*
1,4-Difluorobenzene (Surr)	*104*		*70 - 130*	*10/14/22 14:55*	*10/16/22 09:07*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00401	U	0.00401		mg/Kg			10/17/22 12:04	1

Method: SW846 8015 NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0		mg/Kg			10/13/22 11:39	1

Client Sample Results

Client: Terracon Consulting Eng & Scientists
Job ID: 890-3191-1
Project/Site: Aikman State #001

Client Sample ID: FS04
Lab Sample ID: 890-3191-8
Date Collected: 10/10/22 12:04
Matrix: Solid
Date Received: 10/10/22 15:58
Sample Depth: 2'

Method: SW846 8015B NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U *1	50.0		mg/Kg		10/12/22 15:33	10/13/22 01:28	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		10/12/22 15:33	10/13/22 01:28	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		10/12/22 15:33	10/13/22 01:28	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*97*		*70 - 130*	*10/12/22 15:33*	*10/13/22 01:28*	*1*
o-Terphenyl	*109*		*70 - 130*	*10/12/22 15:33*	*10/13/22 01:28*	*1*

Method: MCAWW 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**184**		5.00		mg/Kg			10/14/22 13:38	1

Client Sample ID: FS05
Lab Sample ID: 890-3191-9
Date Collected: 10/10/22 12:06
Matrix: Solid
Date Received: 10/10/22 15:58
Sample Depth: 2'

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		10/14/22 14:55	10/16/22 09:27	1
Toluene	<0.00199	U	0.00199		mg/Kg		10/14/22 14:55	10/16/22 09:27	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		10/14/22 14:55	10/16/22 09:27	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		10/14/22 14:55	10/16/22 09:27	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		10/14/22 14:55	10/16/22 09:27	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		10/14/22 14:55	10/16/22 09:27	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*116*		*70 - 130*	*10/14/22 14:55*	*10/16/22 09:27*	*1*
1,4-Difluorobenzene (Surr)	*68*	*S1-*	*70 - 130*	*10/14/22 14:55*	*10/16/22 09:27*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398		mg/Kg			10/17/22 12:04	1

Method: SW846 8015 NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.8	U	49.8		mg/Kg			10/13/22 11:39	1

Method: SW846 8015B NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.8	U *1	49.8		mg/Kg		10/12/22 15:33	10/13/22 01:49	1
Diesel Range Organics (Over C10-C28)	<49.8	U	49.8		mg/Kg		10/12/22 15:33	10/13/22 01:49	1
OII Range Organics (Over C28-C36)	<49.8	U	49.8		mg/Kg		10/12/22 15:33	10/13/22 01:49	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*99*		*70 - 130*	*10/12/22 15:33*	*10/13/22 01:49*	*1*
o-Terphenyl	*113*		*70 - 130*	*10/12/22 15:33*	*10/13/22 01:49*	*1*

Client Sample Results

Client: Terracon Consulting Eng & Scientists
Project/Site: Aikman State #001

Job ID: 890-3191-1

Client Sample ID: FS05

Lab Sample ID: 890-3191-9
Matrix: Solid
Date Collected: 10/10/22 12:06
Date Received: 10/10/22 15:58
Sample Depth: 2'

Method: MCAWW 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	27.8		4.99		mg/Kg			10/14/22 13:43	1

Client Sample ID: FS06

Lab Sample ID: 890-3191-10
Matrix: Solid
Date Collected: 10/10/22 12:08
Date Received: 10/10/22 15:58
Sample Depth: 8'

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		10/14/22 14:55	10/16/22 09:48	1
Toluene	<0.00200	U	0.00200		mg/Kg		10/14/22 14:55	10/16/22 09:48	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		10/14/22 14:55	10/16/22 09:48	1
m-Xylene & p-Xylene	<0.00399	U	0.00399		mg/Kg		10/14/22 14:55	10/16/22 09:48	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		10/14/22 14:55	10/16/22 09:48	1
Xylenes, Total	<0.00399	U	0.00399		mg/Kg		10/14/22 14:55	10/16/22 09:48	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*122*		*70 - 130*	*10/14/22 14:55*	*10/16/22 09:48*	*1*
1,4-Difluorobenzene (Surr)	*98*		*70 - 130*	*10/14/22 14:55*	*10/16/22 09:48*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00399	U	0.00399		mg/Kg			10/17/22 12:04	1

Method: SW846 8015 NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.8	U	49.8		mg/Kg			10/13/22 11:39	1

Method: SW846 8015B NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.8	U *1	49.8		mg/Kg		10/12/22 15:33	10/13/22 02:10	1
Diesel Range Organics (Over C10-C28)	<49.8	U	49.8		mg/Kg		10/12/22 15:33	10/13/22 02:10	1
OII Range Organics (Over C28-C36)	<49.8	U	49.8		mg/Kg		10/12/22 15:33	10/13/22 02:10	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*102*		*70 - 130*	*10/12/22 15:33*	*10/13/22 02:10*	*1*
o-Terphenyl	*117*		*70 - 130*	*10/12/22 15:33*	*10/13/22 02:10*	*1*

Method: MCAWW 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	16.7		4.98		mg/Kg			10/14/22 13:48	1

Client Sample Results

Client: Terracon Consulting Eng & Scientists
Project/Site: Aikman State #001

Job ID: 890-3191-1

Client Sample ID: FS07

Lab Sample ID: 890-3191-11
Matrix: Solid
Date Collected: 10/10/22 12:10
Date Received: 10/10/22 15:58
Sample Depth: 8'

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		10/14/22 14:55	10/16/22 11:12	1
Toluene	<0.00200	U	0.00200		mg/Kg		10/14/22 14:55	10/16/22 11:12	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		10/14/22 14:55	10/16/22 11:12	1
m-Xylene & p-Xylene	<0.00399	U	0.00399		mg/Kg		10/14/22 14:55	10/16/22 11:12	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		10/14/22 14:55	10/16/22 11:12	1
Xylenes, Total	<0.00399	U	0.00399		mg/Kg		10/14/22 14:55	10/16/22 11:12	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*108*		*70 - 130*	*10/14/22 14:55*	*10/16/22 11:12*	*1*
1,4-Difluorobenzene (Surr)	*91*		*70 - 130*	*10/14/22 14:55*	*10/16/22 11:12*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00399	U	0.00399		mg/Kg			10/17/22 12:04	1

Method: SW846 8015 NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0		mg/Kg			10/13/22 11:39	1

Method: SW846 8015B NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U *1	50.0		mg/Kg		10/12/22 15:33	10/13/22 02:52	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		10/12/22 15:33	10/13/22 02:52	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		10/12/22 15:33	10/13/22 02:52	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*111*		*70 - 130*	*10/12/22 15:33*	*10/13/22 02:52*	*1*
o-Terphenyl	*126*		*70 - 130*	*10/12/22 15:33*	*10/13/22 02:52*	*1*

Method: MCAWW 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**76.4**		5.00		mg/Kg			10/14/22 13:52	1

Client Sample ID: FS08

Lab Sample ID: 890-3191-12
Matrix: Solid
Date Collected: 10/10/22 12:12
Date Received: 10/10/22 15:58
Sample Depth: 8'

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		10/14/22 14:55	10/16/22 11:32	1
Toluene	<0.00199	U	0.00199		mg/Kg		10/14/22 14:55	10/16/22 11:32	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		10/14/22 14:55	10/16/22 11:32	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		10/14/22 14:55	10/16/22 11:32	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		10/14/22 14:55	10/16/22 11:32	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		10/14/22 14:55	10/16/22 11:32	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*115*		*70 - 130*	*10/14/22 14:55*	*10/16/22 11:32*	*1*

Eurofins Carlsbad

Client Sample Results

Client: Terracon Consulting Eng & Scientists
Project/Site: Aikman State #001

Job ID: 890-3191-1

Client Sample ID: FS08

Lab Sample ID: 890-3191-12
Matrix: Solid
Date Collected: 10/10/22 12:12
Date Received: 10/10/22 15:58
Sample Depth: 8'

Method: SW846 8021B - Volatile Organic Compounds (GC) (Continued)

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Difluorobenzene (Surr)	*101*		*70 - 130*	*10/14/22 14:55*	*10/16/22 11:32*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398		mg/Kg			10/17/22 12:04	1

Method: SW846 8015 NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9		mg/Kg			10/13/22 11:39	1

Method: SW846 8015B NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U *1	49.9		mg/Kg		10/12/22 15:33	10/13/22 03:13	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		10/12/22 15:33	10/13/22 03:13	1
OII Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		10/12/22 15:33	10/13/22 03:13	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*98*		*70 - 130*	*10/12/22 15:33*	*10/13/22 03:13*	*1*
o-Terphenyl	*109*		*70 - 130*	*10/12/22 15:33*	*10/13/22 03:13*	*1*

Method: MCAWW 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**3120**		24.8		mg/Kg			10/14/22 14:07	5

Client Sample ID: FS09

Lab Sample ID: 890-3191-13
Matrix: Solid
Date Collected: 10/10/22 12:14
Date Received: 10/10/22 15:58
Sample Depth: 8'

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.0199	U	0.0199		mg/Kg		10/14/22 14:55	10/16/22 13:57	10
Toluene	**0.0912**		0.0199		mg/Kg		10/14/22 14:55	10/16/22 13:57	10
Ethylbenzene	<0.0199	U	0.0199		mg/Kg		10/14/22 14:55	10/16/22 13:57	10
m-Xylene & p-Xylene	<0.0398	U	0.0398		mg/Kg		10/14/22 14:55	10/16/22 13:57	10
o-Xylene	<0.0199	U	0.0199		mg/Kg		10/14/22 14:55	10/16/22 13:57	10
Xylenes, Total	<0.0398	U	0.0398		mg/Kg		10/14/22 14:55	10/16/22 13:57	10

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*178*	*S1+*	*70 - 130*	*10/14/22 14:55*	*10/16/22 13:57*	*10*
1,4-Difluorobenzene (Surr)	*86*		*70 - 130*	*10/14/22 14:55*	*10/16/22 13:57*	*10*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	**0.0912**		0.0398		mg/Kg			10/17/22 12:04	1

Method: SW846 8015 NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**104**		49.9		mg/Kg			10/13/22 11:39	1

Client Sample Results

Client: Terracon Consulting Eng & Scientists
Job ID: 890-3191-1
Project/Site: Aikman State #001

Client Sample ID: FS09
Lab Sample ID: 890-3191-13
Date Collected: 10/10/22 12:14
Matrix: Solid
Date Received: 10/10/22 15:58
Sample Depth: 8'

Method: SW846 8015B NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U *1	49.9		mg/Kg		10/12/22 15:33	10/13/22 03:34	1
Diesel Range Organics (Over C10-C28)	104		49.9		mg/Kg		10/12/22 15:33	10/13/22 03:34	1
OII Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		10/12/22 15:33	10/13/22 03:34	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*101*		*70 - 130*	*10/12/22 15:33*	*10/13/22 03:34*	*1*
o-Terphenyl	*115*		*70 - 130*	*10/12/22 15:33*	*10/13/22 03:34*	*1*

Method: MCAWW 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	52.1		5.01		mg/Kg			10/14/22 14:12	1

Client Sample ID: FS10
Lab Sample ID: 890-3191-14
Date Collected: 10/10/22 12:16
Matrix: Solid
Date Received: 10/10/22 15:58
Sample Depth: 8'

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00201	U	0.00201		mg/Kg		10/14/22 14:55	10/16/22 11:53	1
Toluene	<0.00201	U	0.00201		mg/Kg		10/14/22 14:55	10/16/22 11:53	1
Ethylbenzene	<0.00201	U	0.00201		mg/Kg		10/14/22 14:55	10/16/22 11:53	1
m-Xylene & p-Xylene	<0.00402	U	0.00402		mg/Kg		10/14/22 14:55	10/16/22 11:53	1
o-Xylene	<0.00201	U	0.00201		mg/Kg		10/14/22 14:55	10/16/22 11:53	1
Xylenes, Total	<0.00402	U	0.00402		mg/Kg		10/14/22 14:55	10/16/22 11:53	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*123*		*70 - 130*	*10/14/22 14:55*	*10/16/22 11:53*	*1*
1,4-Difluorobenzene (Surr)	*97*		*70 - 130*	*10/14/22 14:55*	*10/16/22 11:53*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00402	U	0.00402		mg/Kg			10/17/22 12:04	1

Method: SW846 8015 NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.8	U	49.8		mg/Kg			10/13/22 11:39	1

Method: SW846 8015B NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.8	U *1	49.8		mg/Kg		10/12/22 15:33	10/13/22 03:55	1
Diesel Range Organics (Over C10-C28)	<49.8	U	49.8		mg/Kg		10/12/22 15:33	10/13/22 03:55	1
OII Range Organics (Over C28-C36)	<49.8	U	49.8		mg/Kg		10/12/22 15:33	10/13/22 03:55	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*102*		*70 - 130*	*10/12/22 15:33*	*10/13/22 03:55*	*1*
o-Terphenyl	*112*		*70 - 130*	*10/12/22 15:33*	*10/13/22 03:55*	*1*

Client Sample Results

Client: Terracon Consulting Eng & Scientists
Project/Site: Aikman State #001

Job ID: 890-3191-1

Client Sample ID: FS10

Lab Sample ID: 890-3191-14
Matrix: Solid
Date Collected: 10/10/22 12:16
Date Received: 10/10/22 15:58
Sample Depth: 8'

Method: MCAWW 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	399		5.04		mg/Kg			10/14/22 14:26	1

Client Sample ID: FS11

Lab Sample ID: 890-3191-15
Matrix: Solid
Date Collected: 10/10/22 12:18
Date Received: 10/10/22 15:58
Sample Depth: 8'

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		10/14/22 14:55	10/16/22 12:14	1
Toluene	<0.00200	U	0.00200		mg/Kg		10/14/22 14:55	10/16/22 12:14	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		10/14/22 14:55	10/16/22 12:14	1
m-Xylene & p-Xylene	<0.00401	U	0.00401		mg/Kg		10/14/22 14:55	10/16/22 12:14	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		10/14/22 14:55	10/16/22 12:14	1
Xylenes, Total	<0.00401	U	0.00401		mg/Kg		10/14/22 14:55	10/16/22 12:14	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*38*	*S1-*	*70 - 130*	*10/14/22 14:55*	*10/16/22 12:14*	*1*
1,4-Difluorobenzene (Surr)	*73*		*70 - 130*	*10/14/22 14:55*	*10/16/22 12:14*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00401	U	0.00401		mg/Kg			10/17/22 12:04	1

Method: SW846 8015 NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0		mg/Kg			10/13/22 11:39	1

Method: SW846 8015B NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U *1	50.0		mg/Kg		10/12/22 15:33	10/13/22 04:16	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		10/12/22 15:33	10/13/22 04:16	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		10/12/22 15:33	10/13/22 04:16	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*99*		*70 - 130*	*10/12/22 15:33*	*10/13/22 04:16*	*1*
o-Terphenyl	*112*		*70 - 130*	*10/12/22 15:33*	*10/13/22 04:16*	*1*

Method: MCAWW 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	142		4.98		mg/Kg			10/14/22 14:31	1

Client Sample Results

Client: Terracon Consulting Eng & Scientists
Project/Site: Aikman State #001

Job ID: 890-3191-1

Client Sample ID: FS12

Lab Sample ID: 890-3191-16
Matrix: Solid
Date Collected: 10/10/22 12:20
Date Received: 10/10/22 15:58
Sample Depth: 8'

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	**0.0869**		0.0198		mg/Kg		10/14/22 14:55	10/16/22 14:23	10
Toluene	<0.0198	U	0.0198		mg/Kg		10/14/22 14:55	10/16/22 14:23	10
Ethylbenzene	<0.0198	U	0.0198		mg/Kg		10/14/22 14:55	10/16/22 14:23	10
m-Xylene & p-Xylene	<0.0396	U	0.0396		mg/Kg		10/14/22 14:55	10/16/22 14:23	10
o-Xylene	**0.0291**		0.0198		mg/Kg		10/14/22 14:55	10/16/22 14:23	10
Xylenes, Total	<0.0396	U	0.0396		mg/Kg		10/14/22 14:55	10/16/22 14:23	10

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*158*	*S1+*	*70 - 130*	*10/14/22 14:55*	*10/16/22 14:23*	*10*
1,4-Difluorobenzene (Surr)	*99*		*70 - 130*	*10/14/22 14:55*	*10/16/22 14:23*	*10*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	**0.116**		0.0396		mg/Kg			10/17/22 12:04	1

Method: SW846 8015 NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0		mg/Kg			10/13/22 11:39	1

Method: SW846 8015B NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U *1	50.0		mg/Kg		10/12/22 15:33	10/13/22 04:38	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		10/12/22 15:33	10/13/22 04:38	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		10/12/22 15:33	10/13/22 04:38	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*95*		*70 - 130*	*10/12/22 15:33*	*10/13/22 04:38*	*1*
o-Terphenyl	*108*		*70 - 130*	*10/12/22 15:33*	*10/13/22 04:38*	*1*

Method: MCAWW 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**269**		5.03		mg/Kg			10/14/22 14:36	1

Client Sample ID: FS13

Lab Sample ID: 890-3191-17
Matrix: Solid
Date Collected: 10/10/22 12:22
Date Received: 10/10/22 15:58
Sample Depth: 8'

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		10/14/22 14:55	10/16/22 12:34	1
Toluene	<0.00200	U	0.00200		mg/Kg		10/14/22 14:55	10/16/22 12:34	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		10/14/22 14:55	10/16/22 12:34	1
m-Xylene & p-Xylene	<0.00399	U	0.00399		mg/Kg		10/14/22 14:55	10/16/22 12:34	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		10/14/22 14:55	10/16/22 12:34	1
Xylenes, Total	<0.00399	U	0.00399		mg/Kg		10/14/22 14:55	10/16/22 12:34	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*115*		*70 - 130*	*10/14/22 14:55*	*10/16/22 12:34*	*1*

Client Sample Results

Client: Terracon Consulting Eng & Scientists
Project/Site: Aikman State #001

Job ID: 890-3191-1

Client Sample ID: FS13

Lab Sample ID: 890-3191-17
Matrix: Solid
Date Collected: 10/10/22 12:22
Date Received: 10/10/22 15:58
Sample Depth: 8'

Method: SW846 8021B - Volatile Organic Compounds (GC) (Continued)

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Difluorobenzene (Surr)	*96*		*70 - 130*	*10/14/22 14:55*	*10/16/22 12:34*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00399	U	0.00399		mg/Kg			10/17/22 12:04	1

Method: SW846 8015 NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9		mg/Kg			10/13/22 11:39	1

Method: SW846 8015B NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9		mg/Kg		10/12/22 09:06	10/12/22 20:07	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		10/12/22 09:06	10/12/22 20:07	1
OII Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		10/12/22 09:06	10/12/22 20:07	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*97*		*70 - 130*	*10/12/22 09:06*	*10/12/22 20:07*	*1*
o-Terphenyl	*110*		*70 - 130*	*10/12/22 09:06*	*10/12/22 20:07*	*1*

Method: MCAWW 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**32.6**		4.99		mg/Kg			10/14/22 14:41	1

Client Sample ID: FS14

Lab Sample ID: 890-3191-18
Matrix: Solid
Date Collected: 10/10/22 12:24
Date Received: 10/10/22 15:58
Sample Depth: 8'

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00202	U	0.00202		mg/Kg		10/14/22 14:55	10/16/22 12:55	1
Toluene	<0.00202	U	0.00202		mg/Kg		10/14/22 14:55	10/16/22 12:55	1
Ethylbenzene	<0.00202	U	0.00202		mg/Kg		10/14/22 14:55	10/16/22 12:55	1
m-Xylene & p-Xylene	<0.00403	U	0.00403		mg/Kg		10/14/22 14:55	10/16/22 12:55	1
o-Xylene	<0.00202	U	0.00202		mg/Kg		10/14/22 14:55	10/16/22 12:55	1
Xylenes, Total	<0.00403	U	0.00403		mg/Kg		10/14/22 14:55	10/16/22 12:55	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*116*		*70 - 130*	*10/14/22 14:55*	*10/16/22 12:55*	*1*
1,4-Difluorobenzene (Surr)	*100*		*70 - 130*	*10/14/22 14:55*	*10/16/22 12:55*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00403	U	0.00403		mg/Kg			10/17/22 12:04	1

Method: SW846 8015 NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9		mg/Kg			10/13/22 11:39	1

Client Sample Results

Client: Terracon Consulting Eng & Scientists
Project/Site: Aikman State #001

Job ID: 890-3191-1

Client Sample ID: FS14
Date Collected: 10/10/22 12:24
Date Received: 10/10/22 15:58
Sample Depth: 8'

Lab Sample ID: 890-3191-18
Matrix: Solid

Method: SW846 8015B NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9		mg/Kg		10/12/22 09:06	10/12/22 20:28	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		10/12/22 09:06	10/12/22 20:28	1
OII Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		10/12/22 09:06	10/12/22 20:28	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*97*		*70 - 130*	*10/12/22 09:06*	*10/12/22 20:28*	*1*
o-Terphenyl	*112*		*70 - 130*	*10/12/22 09:06*	*10/12/22 20:28*	*1*

Method: MCAWW 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**53.4**		5.02		mg/Kg			10/14/22 14:46	1

Surrogate Summary

Client: Terracon Consulting Eng & Scientists
Project/Site: Aikman State #001

Job ID: 890-3191-1

Method: 8021B - Volatile Organic Compounds (GC)

Matrix: Solid **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)	
Lab Sample ID	Client Sample ID	BFB1 (70-130)	DFBZ1 (70-130)
890-3191-1	N-SW	89	72
890-3191-2	E-SW	129	91
890-3191-3	S-SW	71	73
890-3191-4	W-SW	77	77
890-3191-5	FS01	104	65 S1-
890-3191-6	FS02	116	109
890-3191-7	FS03	109	112
890-3191-8	FS04	116	104
890-3191-9	FS05	116	68 S1-
890-3191-10	FS06	122	98
890-3191-11	FS07	108	91
890-3191-12	FS08	115	101
890-3191-13	FS09	178 S1+	86
890-3191-14	FS10	123	97
890-3191-15	FS11	38 S1-	73
890-3191-16	FS12	158 S1+	99
890-3191-17	FS13	115	96
890-3191-18	FS14	116	100
890-3191-A-1-G MS	890-3191-A-1-G MS	91	94
890-3191-A-1-H MSD	890-3191-A-1-H MSD	74	63 S1-
LCS 880-36982/1-A	Lab Control Sample	86	85
LCS 880-37048/1-A	Lab Control Sample	94	107
LCSD 880-36982/2-A	Lab Control Sample Dup	97	89
LCSD 880-37048/2-A	Lab Control Sample Dup	87	106
MB 880-36976/5-A	Method Blank	96	88
MB 880-36982/5-A	Method Blank	106	89
MB 880-37048/5-A	Method Blank	91	110

Surrogate Legend

BFB = 4-Bromofluorobenzene (Surr)

DFBZ = 1,4-Difluorobenzene (Surr)

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

Matrix: Solid **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)	
Lab Sample ID	Client Sample ID	1CO1 (70-130)	OTPH1 (70-130)
890-3191-1	N-SW	104	114
890-3191-1 MS	N-SW	82	83
890-3191-1 MSD	N-SW	84	84
890-3191-2	E-SW	95	107
890-3191-3	S-SW	98	111
890-3191-4	W-SW	97	111
890-3191-5	FS01	100	115
890-3191-6	FS02	116	131 S1+
890-3191-7	FS03	98	113
890-3191-8	FS04	97	109
890-3191-9	FS05	99	113
890-3191-10	FS06	102	117

Surrogate Summary

Client: Terracon Consulting Eng & Scientists Job ID: 890-3191-1
Project/Site: Aikman State #001

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

Matrix: Solid **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)									
		1CO1	OTPH1								
Lab Sample ID	Client Sample ID	(70-130)	(70-130)								
890-3191-11	FS07	111	126								
890-3191-12	FS08	98	109								
890-3191-13	FS09	101	115								
890-3191-14	FS10	102	112								
890-3191-15	FS11	99	112								
890-3191-16	FS12	95	108								
890-3191-17	FS13	97	110								
890-3191-18	FS14	97	112								
LCS 880-36720/2-A	Lab Control Sample	94	109								
LCS 880-36769/2-A	Lab Control Sample	107	122								
LCSD 880-36720/3-A	Lab Control Sample Dup	93	105								
LCSD 880-36769/3-A	Lab Control Sample Dup	94	108								
MB 880-36720/1-A	Method Blank	97	112								
MB 880-36769/1-A	Method Blank	92	107								

Surrogate Legend

1CO = 1-Chlorooctane

OTPH = o-Terphenyl

QC Sample Results

Client: Terracon Consulting Eng & Scientists
Project/Site: Aikman State #001

Job ID: 890-3191-1

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-36976/5-A
Matrix: Solid
Analysis Batch: 37017

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 36976

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		10/14/22 14:04	10/15/22 19:40	1
Toluene	<0.00200	U	0.00200		mg/Kg		10/14/22 14:04	10/15/22 19:40	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		10/14/22 14:04	10/15/22 19:40	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		10/14/22 14:04	10/15/22 19:40	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		10/14/22 14:04	10/15/22 19:40	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		10/14/22 14:04	10/15/22 19:40	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*96*		*70 - 130*	*10/14/22 14:04*	*10/15/22 19:40*	*1*
1,4-Difluorobenzene (Surr)	*88*		*70 - 130*	*10/14/22 14:04*	*10/15/22 19:40*	*1*

Lab Sample ID: MB 880-36982/5-A
Matrix: Solid
Analysis Batch: 37017

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 36982

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		10/14/22 14:55	10/16/22 06:20	1
Toluene	<0.00200	U	0.00200		mg/Kg		10/14/22 14:55	10/16/22 06:20	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		10/14/22 14:55	10/16/22 06:20	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		10/14/22 14:55	10/16/22 06:20	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		10/14/22 14:55	10/16/22 06:20	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		10/14/22 14:55	10/16/22 06:20	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*106*		*70 - 130*	*10/14/22 14:55*	*10/16/22 06:20*	*1*
1,4-Difluorobenzene (Surr)	*89*		*70 - 130*	*10/14/22 14:55*	*10/16/22 06:20*	*1*

Lab Sample ID: LCS 880-36982/1-A
Matrix: Solid
Analysis Batch: 37017

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 36982

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	0.100	0.09388		mg/Kg		94	70 - 130
Toluene	0.100	0.09749		mg/Kg		97	70 - 130
Ethylbenzene	0.100	0.08906		mg/Kg		89	70 - 130
m-Xylene & p-Xylene	0.200	0.1896		mg/Kg		95	70 - 130
o-Xylene	0.100	0.09515		mg/Kg		95	70 - 130

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*86*		*70 - 130*
1,4-Difluorobenzene (Surr)	*85*		*70 - 130*

Lab Sample ID: LCSD 880-36982/2-A
Matrix: Solid
Analysis Batch: 37017

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 36982

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	0.100	0.1040		mg/Kg		104	70 - 130	10	35

QC Sample Results

Client: Terracon Consulting Eng & Scientists
Project/Site: Aikman State #001

Job ID: 890-3191-1

Method: 8021B - Volatile Organic Compounds (GC) (Continued)

Lab Sample ID: LCSD 880-36982/2-A
Matrix: Solid
Analysis Batch: 37017

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 36982

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Toluene			0.100	0.1093		mg/Kg		109	70 - 130	11	35
Ethylbenzene			0.100	0.1015		mg/Kg		102	70 - 130	13	35
m-Xylene & p-Xylene			0.200	0.2150		mg/Kg		107	70 - 130	13	35
o-Xylene			0.100	0.1113		mg/Kg		111	70 - 130	16	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*97*		*70 - 130*
1,4-Difluorobenzene (Surr)	*89*		*70 - 130*

Lab Sample ID: 890-3191-A-1-G MS
Matrix: Solid
Analysis Batch: 37017

Client Sample ID: 890-3191-A-1-G MS
Prep Type: Total/NA
Prep Batch: 36982

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene	0.0114	F2 F1	0.101	0.07686	F1	mg/Kg		65	70 - 130		
Toluene	0.0933	F2 F1	0.101	0.08499	F1	mg/Kg		-8	70 - 130		
Ethylbenzene	0.0140	F1	0.101	0.07579	F1	mg/Kg		61	70 - 130		
m-Xylene & p-Xylene	0.128	F1	0.201	0.1574	F1	mg/Kg		15	70 - 130		
o-Xylene	0.0401	F1	0.101	0.07955	F1	mg/Kg		39	70 - 130		

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*91*		*70 - 130*
1,4-Difluorobenzene (Surr)	*94*		*70 - 130*

Lab Sample ID: 890-3191-A-1-H MSD
Matrix: Solid
Analysis Batch: 37017

Client Sample ID: 890-3191-A-1-H MSD
Prep Type: Total/NA
Prep Batch: 36982

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	0.0114	F2 F1	0.0996	0.04672	F2 F1	mg/Kg		35	70 - 130	49	35
Toluene	0.0933	F2 F1	0.0996	0.05328	F2 F1	mg/Kg		-40	70 - 130	46	35
Ethylbenzene	0.0140	F1	0.0996	0.05814	F1	mg/Kg		44	70 - 130	26	35
m-Xylene & p-Xylene	0.128	F1	0.199	0.1225	F1	mg/Kg		-3	70 - 130	25	35
o-Xylene	0.0401	F1	0.0996	0.06679	F1	mg/Kg		27	70 - 130	17	35

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*74*		*70 - 130*
1,4-Difluorobenzene (Surr)	*63*	*S1-*	*70 - 130*

Lab Sample ID: MB 880-37048/5-A
Matrix: Solid
Analysis Batch: 37045

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 37048

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		10/17/22 08:52	10/17/22 12:00	1
Toluene	<0.00200	U	0.00200		mg/Kg		10/17/22 08:52	10/17/22 12:00	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		10/17/22 08:52	10/17/22 12:00	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		10/17/22 08:52	10/17/22 12:00	1

QC Sample Results

Client: Terracon Consulting Eng & Scientists
Project/Site: Aikman State #001

Job ID: 890-3191-1

Method: 8021B - Volatile Organic Compounds (GC) (Continued)

Lab Sample ID: MB 880-37048/5-A
Matrix: Solid
Analysis Batch: 37045

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 37048

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
o-Xylene	<0.00200	U	0.00200		mg/Kg		10/17/22 08:52	10/17/22 12:00	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		10/17/22 08:52	10/17/22 12:00	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*91*		*70 - 130*	*10/17/22 08:52*	*10/17/22 12:00*	*1*
1,4-Difluorobenzene (Surr)	*110*		*70 - 130*	*10/17/22 08:52*	*10/17/22 12:00*	*1*

Lab Sample ID: LCS 880-37048/1-A
Matrix: Solid
Analysis Batch: 37045

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 37048

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	0.100	0.1049		mg/Kg		105	70 - 130
Toluene	0.100	0.1048		mg/Kg		105	70 - 130
Ethylbenzene	0.100	0.09253		mg/Kg		93	70 - 130
m-Xylene & p-Xylene	0.200	0.1869		mg/Kg		93	70 - 130
o-Xylene	0.100	0.09065		mg/Kg		91	70 - 130

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*94*		*70 - 130*
1,4-Difluorobenzene (Surr)	*107*		*70 - 130*

Lab Sample ID: LCSD 880-37048/2-A
Matrix: Solid
Analysis Batch: 37045

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 37048

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	0.100	0.09963		mg/Kg		100	70 - 130	5	35
Toluene	0.100	0.09719		mg/Kg		97	70 - 130	7	35
Ethylbenzene	0.100	0.08715		mg/Kg		87	70 - 130	6	35
m-Xylene & p-Xylene	0.200	0.1751		mg/Kg		88	70 - 130	7	35
o-Xylene	0.100	0.08443		mg/Kg		84	70 - 130	7	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*87*		*70 - 130*
1,4-Difluorobenzene (Surr)	*106*		*70 - 130*

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

Lab Sample ID: MB 880-36720/1-A
Matrix: Solid
Analysis Batch: 36709

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 36720

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		10/12/22 09:06	10/12/22 10:59	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		10/12/22 09:06	10/12/22 10:59	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		10/12/22 09:06	10/12/22 10:59	1

QC Sample Results

Client: Terracon Consulting Eng & Scientists
Project/Site: Aikman State #001

Job ID: 890-3191-1

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

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	97		70 - 130	10/12/22 09:06	10/12/22 10:59	1
o-Terphenyl	112		70 - 130	10/12/22 09:06	10/12/22 10:59	1

Lab Sample ID: LCS 880-36720/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 36709 — **Prep Batch: 36720**

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Gasoline Range Organics (GRO)-C6-C10			1000	952.0		mg/Kg		95	70 - 130		
Diesel Range Organics (Over C10-C28)			1000	1059		mg/Kg		106	70 - 130		

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1-Chlorooctane	94		70 - 130
o-Terphenyl	109		70 - 130

Lab Sample ID: LCSD 880-36720/3-A — **Client Sample ID: Lab Control Sample Dup**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 36709 — **Prep Batch: 36720**

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			1000	983.6		mg/Kg		98	70 - 130	3	20
Diesel Range Organics (Over C10-C28)			1000	1067		mg/Kg		107	70 - 130	1	20

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
1-Chlorooctane	93		70 - 130
o-Terphenyl	105		70 - 130

Lab Sample ID: MB 880-36769/1-A — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 36709 — **Prep Batch: 36769**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		10/12/22 15:33	10/12/22 21:12	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		10/12/22 15:33	10/12/22 21:12	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		10/12/22 15:33	10/12/22 21:12	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	92		70 - 130	10/12/22 15:33	10/12/22 21:12	1
o-Terphenyl	107		70 - 130	10/12/22 15:33	10/12/22 21:12	1

QC Sample Results

Client: Terracon Consulting Eng & Scientists
Project/Site: Aikman State #001

Job ID: 890-3191-1

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

Lab Sample ID: LCS 880-36769/2-A
Matrix: Solid
Analysis Batch: 36709

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 36769

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Gasoline Range Organics (GRO)-C6-C10			1000	1168		mg/Kg		117	70 - 130		
Diesel Range Organics (Over C10-C28)			1000	1102		mg/Kg		110	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1-Chlorooctane	*107*		*70 - 130*
o-Terphenyl	*122*		*70 - 130*

Lab Sample ID: LCSD 880-36769/3-A
Matrix: Solid
Analysis Batch: 36709

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 36769

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			1000	912.0	*1	mg/Kg		91	70 - 130	25	20
Diesel Range Organics (Over C10-C28)			1000	1006		mg/Kg		101	70 - 130	9	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1-Chlorooctane	*94*		*70 - 130*
o-Terphenyl	*108*		*70 - 130*

Lab Sample ID: 890-3191-1 MS
Matrix: Solid
Analysis Batch: 36709

Client Sample ID: N-SW
Prep Type: Total/NA
Prep Batch: 36769

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Gasoline Range Organics (GRO)-C6-C10	<49.8	U *1	998	990.0		mg/Kg		97	70 - 130		
Diesel Range Organics (Over C10-C28)	<49.8	U	998	932.7		mg/Kg		92	70 - 130		

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
1-Chlorooctane	*82*		*70 - 130*
o-Terphenyl	*83*		*70 - 130*

Lab Sample ID: 890-3191-1 MSD
Matrix: Solid
Analysis Batch: 36709

Client Sample ID: N-SW
Prep Type: Total/NA
Prep Batch: 36769

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	<49.8	U *1	998	1048		mg/Kg		102	70 - 130	6	20
Diesel Range Organics (Over C10-C28)	<49.8	U	998	964.2		mg/Kg		95	70 - 130	3	20

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
1-Chlorooctane	*84*		*70 - 130*

QC Sample Results

Client: Terracon Consulting Eng & Scientists
Project/Site: Aikman State #001

Job ID: 890-3191-1

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

Lab Sample ID: 890-3191-1 MSD
Matrix: Solid
Analysis Batch: 36709

Client Sample ID: N-SW
Prep Type: Total/NA
Prep Batch: 36769

Surrogate	MSD %Recovery	MSD Qualifier	Limits
o-Terphenyl	84		70 - 130

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-36771/1-A
Matrix: Solid
Analysis Batch: 36929

Client Sample ID: Method Blank
Prep Type: Soluble

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00	U	5.00		mg/Kg			10/14/22 12:24	1

Lab Sample ID: LCS 880-36771/2-A
Matrix: Solid
Analysis Batch: 36929

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride			250	268.5		mg/Kg		107	90 - 110		

Lab Sample ID: 890-3191-1 MS
Matrix: Solid
Analysis Batch: 36929

Client Sample ID: N-SW
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride	40.3		251	316.9		mg/Kg		110	90 - 110		

Lab Sample ID: 890-3191-1 MSD
Matrix: Solid
Analysis Batch: 36929

Client Sample ID: N-SW
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	40.3		251	314.8		mg/Kg		109	90 - 110	1	20

Lab Sample ID: 890-3191-11 MS
Matrix: Solid
Analysis Batch: 36929

Client Sample ID: FS07
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride	76.4		250	341.4		mg/Kg		106	90 - 110		

Lab Sample ID: 890-3191-11 MSD
Matrix: Solid
Analysis Batch: 36929

Client Sample ID: FS07
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	76.4		250	342.4		mg/Kg		106	90 - 110	0	20

QC Sample Results

Client: Terracon Consulting Eng & Scientists
Project/Site: Aikman State #001

Job ID: 890-3191-1

Method: 300.0 - Anions, Ion Chromatography - RE2

Lab Sample ID: LCSD 880-36771/3-A
Matrix: Solid
Analysis Batch: 36929

Client Sample ID: Lab Control Sample Dup
Prep Type: Soluble

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride - RE2			250	268.7		mg/Kg		107	90 - 110	0	20

QC Association Summary

Client: Terracon Consulting Eng & Scientists
Project/Site: Aikman State #001

Job ID: 890-3191-1

GC VOA

Prep Batch: 36976

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-36976/5-A	Method Blank	Total/NA	Solid	5035	

Prep Batch: 36982

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3191-2	E-SW	Total/NA	Solid	5035	
890-3191-3	S-SW	Total/NA	Solid	5035	
890-3191-5	FS01	Total/NA	Solid	5035	
890-3191-6	FS02	Total/NA	Solid	5035	
890-3191-7	FS03	Total/NA	Solid	5035	
890-3191-8	FS04	Total/NA	Solid	5035	
890-3191-9	FS05	Total/NA	Solid	5035	
890-3191-10	FS06	Total/NA	Solid	5035	
890-3191-11	FS07	Total/NA	Solid	5035	
890-3191-12	FS08	Total/NA	Solid	5035	
890-3191-13	FS09	Total/NA	Solid	5035	
890-3191-14	FS10	Total/NA	Solid	5035	
890-3191-15	FS11	Total/NA	Solid	5035	
890-3191-16	FS12	Total/NA	Solid	5035	
890-3191-17	FS13	Total/NA	Solid	5035	
890-3191-18	FS14	Total/NA	Solid	5035	
MB 880-36982/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-36982/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-36982/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
890-3191-A-1-G MS	890-3191-A-1-G MS	Total/NA	Solid	5035	
890-3191-A-1-H MSD	890-3191-A-1-H MSD	Total/NA	Solid	5035	

Analysis Batch: 37017

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3191-2	E-SW	Total/NA	Solid	8021B	36982
890-3191-3	S-SW	Total/NA	Solid	8021B	36982
890-3191-5	FS01	Total/NA	Solid	8021B	36982
890-3191-6	FS02	Total/NA	Solid	8021B	36982
890-3191-7	FS03	Total/NA	Solid	8021B	36982
890-3191-8	FS04	Total/NA	Solid	8021B	36982
890-3191-9	FS05	Total/NA	Solid	8021B	36982
890-3191-10	FS06	Total/NA	Solid	8021B	36982
890-3191-11	FS07	Total/NA	Solid	8021B	36982
890-3191-12	FS08	Total/NA	Solid	8021B	36982
890-3191-13	FS09	Total/NA	Solid	8021B	36982
890-3191-14	FS10	Total/NA	Solid	8021B	36982
890-3191-15	FS11	Total/NA	Solid	8021B	36982
890-3191-16	FS12	Total/NA	Solid	8021B	36982
890-3191-17	FS13	Total/NA	Solid	8021B	36982
890-3191-18	FS14	Total/NA	Solid	8021B	36982
MB 880-36976/5-A	Method Blank	Total/NA	Solid	8021B	36976
MB 880-36982/5-A	Method Blank	Total/NA	Solid	8021B	36982
LCS 880-36982/1-A	Lab Control Sample	Total/NA	Solid	8021B	36982
LCSD 880-36982/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	36982
890-3191-A-1-G MS	890-3191-A-1-G MS	Total/NA	Solid	8021B	36982
890-3191-A-1-H MSD	890-3191-A-1-H MSD	Total/NA	Solid	8021B	36982

QC Association Summary

Client: Terracon Consulting Eng & Scientists
Project/Site: Aikman State #001

Job ID: 890-3191-1

GC VOA

Analysis Batch: 37045

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3191-1	N-SW	Total/NA	Solid	8021B	37048
890-3191-4	W-SW	Total/NA	Solid	8021B	37048
MB 880-37048/5-A	Method Blank	Total/NA	Solid	8021B	37048
LCS 880-37048/1-A	Lab Control Sample	Total/NA	Solid	8021B	37048
LCSD 880-37048/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	37048

Prep Batch: 37048

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3191-1	N-SW	Total/NA	Solid	5035	
890-3191-4	W-SW	Total/NA	Solid	5035	
MB 880-37048/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-37048/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-37048/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	

Analysis Batch: 37152

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3191-1	N-SW	Total/NA	Solid	Total BTEX	
890-3191-2	E-SW	Total/NA	Solid	Total BTEX	
890-3191-3	S-SW	Total/NA	Solid	Total BTEX	
890-3191-4	W-SW	Total/NA	Solid	Total BTEX	
890-3191-5	FS01	Total/NA	Solid	Total BTEX	
890-3191-6	FS02	Total/NA	Solid	Total BTEX	
890-3191-7	FS03	Total/NA	Solid	Total BTEX	
890-3191-8	FS04	Total/NA	Solid	Total BTEX	
890-3191-9	FS05	Total/NA	Solid	Total BTEX	
890-3191-10	FS06	Total/NA	Solid	Total BTEX	
890-3191-11	FS07	Total/NA	Solid	Total BTEX	
890-3191-12	FS08	Total/NA	Solid	Total BTEX	
890-3191-13	FS09	Total/NA	Solid	Total BTEX	
890-3191-14	FS10	Total/NA	Solid	Total BTEX	
890-3191-15	FS11	Total/NA	Solid	Total BTEX	
890-3191-16	FS12	Total/NA	Solid	Total BTEX	
890-3191-17	FS13	Total/NA	Solid	Total BTEX	
890-3191-18	FS14	Total/NA	Solid	Total BTEX	

GC Semi VOA

Analysis Batch: 36709

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3191-1	N-SW	Total/NA	Solid	8015B NM	36769
890-3191-2	E-SW	Total/NA	Solid	8015B NM	36769
890-3191-3	S-SW	Total/NA	Solid	8015B NM	36769
890-3191-4	W-SW	Total/NA	Solid	8015B NM	36769
890-3191-5	FS01	Total/NA	Solid	8015B NM	36769
890-3191-6	FS02	Total/NA	Solid	8015B NM	36769
890-3191-7	FS03	Total/NA	Solid	8015B NM	36769
890-3191-8	FS04	Total/NA	Solid	8015B NM	36769
890-3191-9	FS05	Total/NA	Solid	8015B NM	36769
890-3191-10	FS06	Total/NA	Solid	8015B NM	36769
890-3191-11	FS07	Total/NA	Solid	8015B NM	36769
890-3191-12	FS08	Total/NA	Solid	8015B NM	36769

QC Association Summary

Client: Terracon Consulting Eng & Scientists
Project/Site: Aikman State #001

Job ID: 890-3191-1

GC Semi VOA (Continued)

Analysis Batch: 36709 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3191-13	FS09	Total/NA	Solid	8015B NM	36769
890-3191-14	FS10	Total/NA	Solid	8015B NM	36769
890-3191-15	FS11	Total/NA	Solid	8015B NM	36769
890-3191-16	FS12	Total/NA	Solid	8015B NM	36769
890-3191-17	FS13	Total/NA	Solid	8015B NM	36720
890-3191-18	FS14	Total/NA	Solid	8015B NM	36720
MB 880-36720/1-A	Method Blank	Total/NA	Solid	8015B NM	36720
MB 880-36769/1-A	Method Blank	Total/NA	Solid	8015B NM	36769
LCS 880-36720/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	36720
LCS 880-36769/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	36769
LCSD 880-36720/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	36720
LCSD 880-36769/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	36769
890-3191-1 MS	N-SW	Total/NA	Solid	8015B NM	36769
890-3191-1 MSD	N-SW	Total/NA	Solid	8015B NM	36769

Prep Batch: 36720

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3191-17	FS13	Total/NA	Solid	8015NM Prep	
890-3191-18	FS14	Total/NA	Solid	8015NM Prep	
MB 880-36720/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-36720/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-36720/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	

Prep Batch: 36769

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3191-1	N-SW	Total/NA	Solid	8015NM Prep	
890-3191-2	E-SW	Total/NA	Solid	8015NM Prep	
890-3191-3	S-SW	Total/NA	Solid	8015NM Prep	
890-3191-4	W-SW	Total/NA	Solid	8015NM Prep	
890-3191-5	FS01	Total/NA	Solid	8015NM Prep	
890-3191-6	FS02	Total/NA	Solid	8015NM Prep	
890-3191-7	FS03	Total/NA	Solid	8015NM Prep	
890-3191-8	FS04	Total/NA	Solid	8015NM Prep	
890-3191-9	FS05	Total/NA	Solid	8015NM Prep	
890-3191-10	FS06	Total/NA	Solid	8015NM Prep	
890-3191-11	FS07	Total/NA	Solid	8015NM Prep	
890-3191-12	FS08	Total/NA	Solid	8015NM Prep	
890-3191-13	FS09	Total/NA	Solid	8015NM Prep	
890-3191-14	FS10	Total/NA	Solid	8015NM Prep	
890-3191-15	FS11	Total/NA	Solid	8015NM Prep	
890-3191-16	FS12	Total/NA	Solid	8015NM Prep	
MB 880-36769/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-36769/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-36769/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-3191-1 MS	N-SW	Total/NA	Solid	8015NM Prep	
890-3191-1 MSD	N-SW	Total/NA	Solid	8015NM Prep	

Analysis Batch: 36870

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3191-1	N-SW	Total/NA	Solid	8015 NM	
890-3191-2	E-SW	Total/NA	Solid	8015 NM	

QC Association Summary

Client: Terracon Consulting Eng & Scientists
Project/Site: Aikman State #001

Job ID: 890-3191-1

GC Semi VOA (Continued)

Analysis Batch: 36870 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3191-3	S-SW	Total/NA	Solid	8015 NM	
890-3191-4	W-SW	Total/NA	Solid	8015 NM	
890-3191-5	FS01	Total/NA	Solid	8015 NM	
890-3191-6	FS02	Total/NA	Solid	8015 NM	
890-3191-7	FS03	Total/NA	Solid	8015 NM	
890-3191-8	FS04	Total/NA	Solid	8015 NM	
890-3191-9	FS05	Total/NA	Solid	8015 NM	
890-3191-10	FS06	Total/NA	Solid	8015 NM	
890-3191-11	FS07	Total/NA	Solid	8015 NM	
890-3191-12	FS08	Total/NA	Solid	8015 NM	
890-3191-13	FS09	Total/NA	Solid	8015 NM	
890-3191-14	FS10	Total/NA	Solid	8015 NM	
890-3191-15	FS11	Total/NA	Solid	8015 NM	
890-3191-16	FS12	Total/NA	Solid	8015 NM	
890-3191-17	FS13	Total/NA	Solid	8015 NM	
890-3191-18	FS14	Total/NA	Solid	8015 NM	

HPLC/IC

Leach Batch: 36771

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3191-1	N-SW	Soluble	Solid	DI Leach	
890-3191-2	E-SW	Soluble	Solid	DI Leach	
890-3191-3	S-SW	Soluble	Solid	DI Leach	
890-3191-4	W-SW	Soluble	Solid	DI Leach	
890-3191-5	FS01	Soluble	Solid	DI Leach	
890-3191-6	FS02	Soluble	Solid	DI Leach	
890-3191-7	FS03	Soluble	Solid	DI Leach	
890-3191-8	FS04	Soluble	Solid	DI Leach	
890-3191-9	FS05	Soluble	Solid	DI Leach	
890-3191-10	FS06	Soluble	Solid	DI Leach	
890-3191-11	FS07	Soluble	Solid	DI Leach	
890-3191-12	FS08	Soluble	Solid	DI Leach	
890-3191-13	FS09	Soluble	Solid	DI Leach	
890-3191-14	FS10	Soluble	Solid	DI Leach	
890-3191-15	FS11	Soluble	Solid	DI Leach	
890-3191-16	FS12	Soluble	Solid	DI Leach	
890-3191-17	FS13	Soluble	Solid	DI Leach	
890-3191-18	FS14	Soluble	Solid	DI Leach	
MB 880-36771/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-36771/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-36771/3-A - RE2	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-3191-1 MS	N-SW	Soluble	Solid	DI Leach	
890-3191-1 MSD	N-SW	Soluble	Solid	DI Leach	
890-3191-11 MS	FS07	Soluble	Solid	DI Leach	
890-3191-11 MSD	FS07	Soluble	Solid	DI Leach	

Analysis Batch: 36929

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3191-1	N-SW	Soluble	Solid	300.0	36771
890-3191-2	E-SW	Soluble	Solid	300.0	36771

QC Association Summary

Client: Terracon Consulting Eng & Scientists
Project/Site: Aikman State #001

Job ID: 890-3191-1

HPLC/IC (Continued)

Analysis Batch: 36929 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3191-3	S-SW	Soluble	Solid	300.0	36771
890-3191-4	W-SW	Soluble	Solid	300.0	36771
890-3191-5	FS01	Soluble	Solid	300.0	36771
890-3191-6	FS02	Soluble	Solid	300.0	36771
890-3191-7	FS03	Soluble	Solid	300.0	36771
890-3191-8	FS04	Soluble	Solid	300.0	36771
890-3191-9	FS05	Soluble	Solid	300.0	36771
890-3191-10	FS06	Soluble	Solid	300.0	36771
890-3191-11	FS07	Soluble	Solid	300.0	36771
890-3191-12	FS08	Soluble	Solid	300.0	36771
890-3191-13	FS09	Soluble	Solid	300.0	36771
890-3191-14	FS10	Soluble	Solid	300.0	36771
890-3191-15	FS11	Soluble	Solid	300.0	36771
890-3191-16	FS12	Soluble	Solid	300.0	36771
890-3191-17	FS13	Soluble	Solid	300.0	36771
890-3191-18	FS14	Soluble	Solid	300.0	36771
MB 880-36771/1-A	Method Blank	Soluble	Solid	300.0	36771
LCS 880-36771/2-A	Lab Control Sample	Soluble	Solid	300.0	36771
LCSD 880-36771/3-A - RE2	Lab Control Sample Dup	Soluble	Solid	300.0	36771
890-3191-1 MS	N-SW	Soluble	Solid	300.0	36771
890-3191-1 MSD	N-SW	Soluble	Solid	300.0	36771
890-3191-11 MS	FS07	Soluble	Solid	300.0	36771
890-3191-11 MSD	FS07	Soluble	Solid	300.0	36771

Lab Chronicle

Client: Terracon Consulting Eng & Scientists
Project/Site: Aikman State #001

Job ID: 890-3191-1

Client Sample ID: N-SW

Lab Sample ID: 890-3191-1
Matrix: Solid
Date Collected: 10/10/22 11:50
Date Received: 10/10/22 15:58

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.01 g	5 mL	37048	10/17/22 08:52	EL	EET MID
Total/NA	Analysis	8021B		10	5 mL	5 mL	37045	10/17/22 13:50	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			37152	10/17/22 12:04	SM	EET MID
Total/NA	Analysis	8015 NM		1			36870	10/13/22 11:39	SM	EET MID
Total/NA	Prep	8015NM Prep			10.04 g	10 mL	36769	10/12/22 15:33	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	36709	10/12/22 22:16	SM	EET MID
Soluble	Leach	DI Leach			4.98 g	50 mL	36771	10/12/22 15:48	KS	EET MID
Soluble	Analysis	300.0		1			36929	10/14/22 12:39	CH	EET MID

Client Sample ID: E-SW

Lab Sample ID: 890-3191-2
Matrix: Solid
Date Collected: 10/10/22 11:52
Date Received: 10/10/22 15:58

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.03 g	5 mL	36982	10/14/22 14:55	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	37017	10/16/22 07:03	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			37152	10/17/22 12:04	SM	EET MID
Total/NA	Analysis	8015 NM		1			36870	10/13/22 11:39	SM	EET MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	36769	10/12/22 15:33	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	36709	10/12/22 23:21	SM	EET MID
Soluble	Leach	DI Leach			5 g	50 mL	36771	10/12/22 15:48	KS	EET MID
Soluble	Analysis	300.0		1			36929	10/14/22 12:53	CH	EET MID

Client Sample ID: S-SW

Lab Sample ID: 890-3191-3
Matrix: Solid
Date Collected: 10/10/22 11:54
Date Received: 10/10/22 15:58

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.01 g	5 mL	36982	10/14/22 14:55	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	37017	10/16/22 07:23	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			37152	10/17/22 12:04	SM	EET MID
Total/NA	Analysis	8015 NM		1			36870	10/13/22 11:39	SM	EET MID
Total/NA	Prep	8015NM Prep			10.04 g	10 mL	36769	10/12/22 15:33	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	36709	10/12/22 23:43	SM	EET MID
Soluble	Leach	DI Leach			5.02 g	50 mL	36771	10/12/22 15:48	KS	EET MID
Soluble	Analysis	300.0		1			36929	10/14/22 12:58	CH	EET MID

Client Sample ID: W-SW

Lab Sample ID: 890-3191-4
Matrix: Solid
Date Collected: 10/10/22 11:56
Date Received: 10/10/22 15:58

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.97 g	5 mL	37048	10/17/22 08:52	EL	EET MID
Total/NA	Analysis	8021B		10	5 mL	5 mL	37045	10/17/22 14:10	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			37152	10/17/22 12:04	SM	EET MID

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Lab Chronicle

Client: Terracon Consulting Eng & Scientists
Project/Site: Aikman State #001

Job ID: 890-3191-1

Client Sample ID: W-SW
Lab Sample ID: 890-3191-4
Date Collected: 10/10/22 11:56
Matrix: Solid
Date Received: 10/10/22 15:58

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8015 NM		1			36870	10/13/22 11:39	SM	EET MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	36769	10/12/22 15:33	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	36709	10/13/22 00:04	SM	EET MID
Soluble	Leach	DI Leach			5 g	50 mL	36771	10/12/22 15:48	KS	EET MID
Soluble	Analysis	300.0		1			36929	10/14/22 13:03	CH	EET MID

Client Sample ID: FS01
Lab Sample ID: 890-3191-5
Date Collected: 10/10/22 11:58
Matrix: Solid
Date Received: 10/10/22 15:58

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.98 g	5 mL	36982	10/14/22 14:55	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	37017	10/16/22 08:05	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			37152	10/17/22 12:04	SM	EET MID
Total/NA	Analysis	8015 NM		1			36870	10/13/22 11:39	SM	EET MID
Total/NA	Prep	8015NM Prep			10.05 g	10 mL	36769	10/12/22 15:33	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	36709	10/13/22 00:25	SM	EET MID
Soluble	Leach	DI Leach			5.01 g	50 mL	36771	10/12/22 15:48	KS	EET MID
Soluble	Analysis	300.0		1			36929	10/14/22 13:08	CH	EET MID

Client Sample ID: FS02
Lab Sample ID: 890-3191-6
Date Collected: 10/10/22 12:00
Matrix: Solid
Date Received: 10/10/22 15:58

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.01 g	5 mL	36982	10/14/22 14:55	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	37017	10/16/22 08:25	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			37152	10/17/22 12:04	SM	EET MID
Total/NA	Analysis	8015 NM		1			36870	10/13/22 11:39	SM	EET MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	36769	10/12/22 15:33	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	36709	10/13/22 00:46	SM	EET MID
Soluble	Leach	DI Leach			4.97 g	50 mL	36771	10/12/22 15:48	KS	EET MID
Soluble	Analysis	300.0		5			36929	10/14/22 13:28	CH	EET MID

Client Sample ID: FS03
Lab Sample ID: 890-3191-7
Date Collected: 10/10/22 12:02
Matrix: Solid
Date Received: 10/10/22 15:58

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.02 g	5 mL	36982	10/14/22 14:55	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	37017	10/16/22 08:46	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			37152	10/17/22 12:04	SM	EET MID
Total/NA	Analysis	8015 NM		1			36870	10/13/22 11:39	SM	EET MID
Total/NA	Prep	8015NM Prep			10.00 g	10 mL	36769	10/12/22 15:33	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	36709	10/13/22 01:07	SM	EET MID

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Lab Chronicle

Client: Terracon Consulting Eng & Scientists
Project/Site: Aikman State #001

Job ID: 890-3191-1

Client Sample ID: FS03

Lab Sample ID: 890-3191-7

Date Collected: 10/10/22 12:02
Matrix: Solid
Date Received: 10/10/22 15:58

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Soluble	Leach	DI Leach			5.03 g	50 mL	36771	10/12/22 15:48	KS	EET MID
Soluble	Analysis	300.0		1			36929	10/14/22 13:33	CH	EET MID

Client Sample ID: FS04

Lab Sample ID: 890-3191-8

Date Collected: 10/10/22 12:04
Matrix: Solid
Date Received: 10/10/22 15:58

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.99 g	5 mL	36982	10/14/22 14:55	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	37017	10/16/22 09:07	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			37152	10/17/22 12:04	SM	EET MID
Total/NA	Analysis	8015 NM		1			36870	10/13/22 11:39	SM	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	36769	10/12/22 15:33	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	36709	10/13/22 01:28	SM	EET MID
Soluble	Leach	DI Leach			5 g	50 mL	36771	10/12/22 15:48	KS	EET MID
Soluble	Analysis	300.0		1			36929	10/14/22 13:38	CH	EET MID

Client Sample ID: FS05

Lab Sample ID: 890-3191-9

Date Collected: 10/10/22 12:06
Matrix: Solid
Date Received: 10/10/22 15:58

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.03 g	5 mL	36982	10/14/22 14:55	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	37017	10/16/22 09:27	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			37152	10/17/22 12:04	SM	EET MID
Total/NA	Analysis	8015 NM		1			36870	10/13/22 11:39	SM	EET MID
Total/NA	Prep	8015NM Prep			10.04 g	10 mL	36769	10/12/22 15:33	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	36709	10/13/22 01:49	SM	EET MID
Soluble	Leach	DI Leach			5.01 g	50 mL	36771	10/12/22 15:48	KS	EET MID
Soluble	Analysis	300.0		1			36929	10/14/22 13:43	CH	EET MID

Client Sample ID: FS06

Lab Sample ID: 890-3191-10

Date Collected: 10/10/22 12:08
Matrix: Solid
Date Received: 10/10/22 15:58

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.01 g	5 mL	36982	10/14/22 14:55	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	37017	10/16/22 09:48	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			37152	10/17/22 12:04	SM	EET MID
Total/NA	Analysis	8015 NM		1			36870	10/13/22 11:39	SM	EET MID
Total/NA	Prep	8015NM Prep			10.04 g	10 mL	36769	10/12/22 15:33	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	36709	10/13/22 02:10	SM	EET MID
Soluble	Leach	DI Leach			5.02 g	50 mL	36771	10/12/22 15:48	KS	EET MID
Soluble	Analysis	300.0		1			36929	10/14/22 13:48	CH	EET MID

Lab Chronicle

Client: Terracon Consulting Eng & Scientists
Project/Site: Aikman State #001

Job ID: 890-3191-1

Client Sample ID: FS07

Lab Sample ID: 890-3191-11
Matrix: Solid
Date Collected: 10/10/22 12:10
Date Received: 10/10/22 15:58

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.01 g	5 mL	36982	10/14/22 14:55	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	37017	10/16/22 11:12	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			37152	10/17/22 12:04	SM	EET MID
Total/NA	Analysis	8015 NM		1			36870	10/13/22 11:39	SM	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	36769	10/12/22 15:33	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	36709	10/13/22 02:52	SM	EET MID
Soluble	Leach	DI Leach			5 g	50 mL	36771	10/12/22 15:48	KS	EET MID
Soluble	Analysis	300.0		1			36929	10/14/22 13:52	CH	EET MID

Client Sample ID: FS08

Lab Sample ID: 890-3191-12
Matrix: Solid
Date Collected: 10/10/22 12:12
Date Received: 10/10/22 15:58

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.02 g	5 mL	36982	10/14/22 14:55	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	37017	10/16/22 11:32	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			37152	10/17/22 12:04	SM	EET MID
Total/NA	Analysis	8015 NM		1			36870	10/13/22 11:39	SM	EET MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	36769	10/12/22 15:33	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	36709	10/13/22 03:13	SM	EET MID
Soluble	Leach	DI Leach			5.05 g	50 mL	36771	10/12/22 15:48	KS	EET MID
Soluble	Analysis	300.0		5			36929	10/14/22 14:07	CH	EET MID

Client Sample ID: FS09

Lab Sample ID: 890-3191-13
Matrix: Solid
Date Collected: 10/10/22 12:14
Date Received: 10/10/22 15:58

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.03 g	5 mL	36982	10/14/22 14:55	MNR	EET MID
Total/NA	Analysis	8021B		10	5 mL	5 mL	37017	10/16/22 13:57	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			37152	10/17/22 12:04	SM	EET MID
Total/NA	Analysis	8015 NM		1			36870	10/13/22 11:39	SM	EET MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	36769	10/12/22 15:33	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	36709	10/13/22 03:34	SM	EET MID
Soluble	Leach	DI Leach			4.99 g	50 mL	36771	10/12/22 15:48	KS	EET MID
Soluble	Analysis	300.0		1			36929	10/14/22 14:12	CH	EET MID

Client Sample ID: FS10

Lab Sample ID: 890-3191-14
Matrix: Solid
Date Collected: 10/10/22 12:16
Date Received: 10/10/22 15:58

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.97 g	5 mL	36982	10/14/22 14:55	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	37017	10/16/22 11:53	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			37152	10/17/22 12:04	SM	EET MID

Lab Chronicle

Client: Terracon Consulting Eng & Scientists
Project/Site: Aikman State #001

Job ID: 890-3191-1

Client Sample ID: FS10

Lab Sample ID: 890-3191-14

Date Collected: 10/10/22 12:16
Date Received: 10/10/22 15:58

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8015 NM		1			36870	10/13/22 11:39	SM	EET MID
Total/NA	Prep	8015NM Prep			10.04 g	10 mL	36769	10/12/22 15:33	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	36709	10/13/22 03:55	SM	EET MID
Soluble	Leach	DI Leach			4.96 g	50 mL	36771	10/12/22 15:48	KS	EET MID
Soluble	Analysis	300.0		1			36929	10/14/22 14:26	CH	EET MID

Client Sample ID: FS11

Lab Sample ID: 890-3191-15

Date Collected: 10/10/22 12:18
Date Received: 10/10/22 15:58

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.99 g	5 mL	36982	10/14/22 14:55	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	37017	10/16/22 12:14	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			37152	10/17/22 12:04	SM	EET MID
Total/NA	Analysis	8015 NM		1			36870	10/13/22 11:39	SM	EET MID
Total/NA	Prep	8015NM Prep			10.00 g	10 mL	36769	10/12/22 15:33	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	36709	10/13/22 04:16	SM	EET MID
Soluble	Leach	DI Leach			5.02 g	50 mL	36771	10/12/22 15:48	KS	EET MID
Soluble	Analysis	300.0		1			36929	10/14/22 14:31	CH	EET MID

Client Sample ID: FS12

Lab Sample ID: 890-3191-16

Date Collected: 10/10/22 12:20
Date Received: 10/10/22 15:58

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.05 g	5 mL	36982	10/14/22 14:55	MNR	EET MID
Total/NA	Analysis	8021B		10	5 mL	5 mL	37017	10/16/22 14:23	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			37152	10/17/22 12:04	SM	EET MID
Total/NA	Analysis	8015 NM		1			36870	10/13/22 11:39	SM	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	36769	10/12/22 15:33	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	36709	10/13/22 04:38	SM	EET MID
Soluble	Leach	DI Leach			4.97 g	50 mL	36771	10/12/22 15:48	KS	EET MID
Soluble	Analysis	300.0		1			36929	10/14/22 14:36	CH	EET MID

Client Sample ID: FS13

Lab Sample ID: 890-3191-17

Date Collected: 10/10/22 12:22
Date Received: 10/10/22 15:58

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.01 g	5 mL	36982	10/14/22 14:55	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	37017	10/16/22 12:34	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			37152	10/17/22 12:04	SM	EET MID
Total/NA	Analysis	8015 NM		1			36870	10/13/22 11:39	SM	EET MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	36720	10/12/22 09:06	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	36709	10/12/22 20:07	SM	EET MID

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Lab Chronicle

Client: Terracon Consulting Eng & Scientists
Project/Site: Aikman State #001

Job ID: 890-3191-1

Client Sample ID: FS13

Lab Sample ID: 890-3191-17

Date Collected: 10/10/22 12:22

Matrix: Solid

Date Received: 10/10/22 15:58

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Soluble	Leach	DI Leach			5.01 g	50 mL	36771	10/12/22 15:48	KS	EET MID
Soluble	Analysis	300.0		1			36929	10/14/22 14:41	CH	EET MID

Client Sample ID: FS14

Lab Sample ID: 890-3191-18

Date Collected: 10/10/22 12:24

Matrix: Solid

Date Received: 10/10/22 15:58

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.96 g	5 mL	36982	10/14/22 14:55	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	37017	10/16/22 12:55	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			37152	10/17/22 12:04	SM	EET MID
Total/NA	Analysis	8015 NM		1			36870	10/13/22 11:39	SM	EET MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	36720	10/12/22 09:06	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	36709	10/12/22 20:28	SM	EET MID
Soluble	Leach	DI Leach			4.98 g	50 mL	36771	10/12/22 15:48	KS	EET MID
Soluble	Analysis	300.0		1			36929	10/14/22 14:46	CH	EET MID

Laboratory References:

EET MID = Eurofins Midland, 1211 W. Florida Ave, Midland, TX 79701, TEL (432)704-5440

Accreditation/Certification Summary

Client: Terracon Consulting Eng & Scientists
Job ID: 890-3191-1
Project/Site: Aikman State #001

Laboratory: Eurofins Midland

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
Texas	NELAP	T104704400-22-24	06-30-23

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
8015 NM		Solid	Total TPH
Total BTEX		Solid	Total BTEX

Method Summary

Client: Terracon Consulting Eng & Scientists
Project/Site: Aikman State #001

Job ID: 890-3191-1

Method	Method Description	Protocol	Laboratory
8021B	Volatile Organic Compounds (GC)	SW846	EET MID
Total BTEX	Total BTEX Calculation	TAL SOP	EET MID
8015 NM	Diesel Range Organics (DRO) (GC)	SW846	EET MID
8015B NM	Diesel Range Organics (DRO) (GC)	SW846	EET MID
300.0	Anions, Ion Chromatography	MCAWW	EET MID
5035	Closed System Purge and Trap	SW846	EET MID
8015NM Prep	Microextraction	SW846	EET MID
DI Leach	Deionized Water Leaching Procedure	ASTM	EET MID

Protocol References:

ASTM = ASTM International

MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions.

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

TAL SOP = TestAmerica Laboratories, Standard Operating Procedure

Laboratory References:

EET MID = Eurofins Midland, 1211 W. Florida Ave, Midland, TX 79701, TEL (432)704-5440

Sample Summary

Client: Terracon Consulting Eng & Scientists
Project/Site: Aikman State #001

Job ID: 890-3191-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-3191-1	N-SW	Solid	10/10/22 11:50	10/10/22 15:58	2'
890-3191-2	E-SW	Solid	10/10/22 11:52	10/10/22 15:58	2'
890-3191-3	S-SW	Solid	10/10/22 11:54	10/10/22 15:58	2'
890-3191-4	W-SW	Solid	10/10/22 11:56	10/10/22 15:58	2'
890-3191-5	FS01	Solid	10/10/22 11:58	10/10/22 15:58	2'
890-3191-6	FS02	Solid	10/10/22 12:00	10/10/22 15:58	2'
890-3191-7	FS03	Solid	10/10/22 12:02	10/10/22 15:58	2'
890-3191-8	FS04	Solid	10/10/22 12:04	10/10/22 15:58	2'
890-3191-9	FS05	Solid	10/10/22 12:06	10/10/22 15:58	2'
890-3191-10	FS06	Solid	10/10/22 12:08	10/10/22 15:58	8'
890-3191-11	FS07	Solid	10/10/22 12:10	10/10/22 15:58	8'
890-3191-12	FS08	Solid	10/10/22 12:12	10/10/22 15:58	8'
890-3191-13	FS09	Solid	10/10/22 12:14	10/10/22 15:58	8'
890-3191-14	FS10	Solid	10/10/22 12:16	10/10/22 15:58	8'
890-3191-15	FS11	Solid	10/10/22 12:18	10/10/22 15:58	8'
890-3191-16	FS12	Solid	10/10/22 12:20	10/10/22 15:58	8'
890-3191-17	FS13	Solid	10/10/22 12:22	10/10/22 15:58	8'
890-3191-18	FS14	Solid	10/10/22 12:24	10/10/22 15:58	8'

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CHAIN OF CUSTOCY RECORD

Page ___ of ___

Terracon

Laboratory:
Address:

Office Location: 4502 W. Pierce St Carlsbad NM, 88220
Phone:
Project Manager: Mike Adams
Contact:
Sampler's Name: Travis Casey
SRS #:
Sampler's Signature:

Project Number:
Project Name: Aikman State #001

ANALYSIS REQUEST

LAB USE ONLYDUE DATE:

TEMP OF COOLER WHEN RECEIVED (°C): 2.4/2.2 -0.2 TAM-007

Matrix	Date	Time	Comp	Grab	Identifying Marks of Sample(s)	Start Depth	End Depth	No. Type of Containers: 4 oz Glass	2 oz Glass	250 ml Poly	Chloride (EPA Method 300)	TPH Extended 8015	BTEX (EPA Method 8021B)	Lab Sample ID
S	10-10	1150	X		N-SW		2'	9			X	X	X	
		1152			E-SW		2'							
		1154			S-SW		2'							
		1156			W-SW		2'							
		1158			FS01		2							
		1200			FS02		2							
		1202			FS03		2							
		1204			FS04		2							
		1206			FS05		2							
		1208			FS06		8							
		1210			FS07		8							
		1212			FS08		8							
		1214			FS09		8							
		1216			FS10		8							
		1218			FS11		8							
		1220			FS12		8							
		1222			FS13		8							
		1224			FS14									

890-3191 Chain of Custody

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

Bill To:

Relinquished by (Signature)	Date:	Time:	Received by (Signature)	Date:	Time:
Relinquished by (Signature)	Date:	Time:	Received by (Signature)	Date:	Time:
		10/10/23	1554		
Relinquished by (Signature)	Date:	Time:	Received by (Signature)	Date:	Time:
Relinquished by (Signature)	Date:	Time:	Received by (Signature)	Date:	Time:

e-mail results to:
joseph.guesnier@terraconc.om
travis.casey@terracon.com
mike.adams@terracon.com

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

Received by OCD: 4/10/2023 1:07:45 PM

Released to Imaging: 8/29/2023 1:29:02 PM

10/17/2022

Login Sample Receipt Checklist

Client: Terracon Consulting Eng & Scientists Job Number: 890-3191-1

Login Number: 3191 **List Source: Eurofins Carlsbad**
List Number: 1
Creator: Stutzman, Amanda

Question	Answer	Comment
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	N/A	Refer to Job Narrative for details.
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	

Login Sample Receipt Checklist

Client: Terracon Consulting Eng & Scientists Job Number: 890-3191-1

Login Number: 3191 **List Source: Eurofins Midland**
List Number: 2 **List Creation: 10/12/22 11:01 AM**
Creator: Rodriguez, Leticia

Question	Answer	Comment
The cooler's custody seal, if present, is intact.	N/A	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	

eurofins | Environment Testing



ANALYTICAL REPORT

Eurofins Carlsbad
1089 N Canal St.
Carlsbad, NM 88220
Tel: (575)988-3199

Laboratory Job ID: 890-3319-1
Client Project/Site: Akman #001

For:
Terracon Consulting Eng & Scientists
5847 50th St
Lubbock, Texas 79424

Attn: Joseph Guesnier

JKramer

Authorized for release by:
11/3/2022 10:37:51 AM

Jessica Kramer, Project Manager
(432)704-5440
Jessica.Kramer@et.eurofinsus.com

LINKS

Review your project results through my EOL

Have a Question? Ask The Expert

Visit us at: www.eurofinsus.com/Env

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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

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

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

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

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

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

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

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

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

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

JKramer

Jessica Kramer
Project Manager
11/3/2022 10:37:51 AM

Client: Terracon Consulting Eng & Scientists
Project/Site: Akman #001

Laboratory Job ID: 890-3319-1

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Definitions/Glossary

Client: Terracon Consulting Eng & Scientists Job ID: 890-3319-1
Project/Site: Akman #001

Qualifiers

GC VOA

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

GC Semi VOA

Qualifier	Qualifier Description
*+	LCS and/or LCSD is outside acceptance limits, high biased.
S1+	Surrogate recovery exceeds control limits, high biased.
U	Indicates the analyte was analyzed for but not detected.

HPLC/IC

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.

Glossary

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

Case Narrative

Client: Terracon Consulting Eng & Scientists
Project/Site: Akman #001

Job ID: 890-3319-1

Job ID: 890-3319-1

Laboratory: Eurofins Carlsbad

Narrative

Job Narrative
890-3319-1

Receipt
The samples were received on 10/28/2022 12:13 PM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 4.8°C

Receipt Exceptions
The following samples > were received and analyzed from an unpreserved bulk soil jar: FS2.1 (890-3319-1) and FS8.1 (890-3319-2).

GC VOA
Method 8021B: The matrix spike duplicate (MSD) recoveries for preparation batch 880-38419 and analytical batch 880-38443 were outside control limits. Non-homogeneity is suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

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

GC Semi VOA
Method 8015MOD_NM: The laboratory control sample (LCS) associated with preparation batch 880-38261 and analytical batch 880-38217 was outside acceptance criteria. Re-extraction and/or re-analysis could not be performed; therefore, the data have been reported. The batch matrix spike/matrix spike duplicate (MS/MSD) was within acceptance limits and may be used to evaluate matrix performance.

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

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

Client Sample Results

Client: Terracon Consulting Eng & Scientists
Project/Site: Akman #001

Job ID: 890-3319-1

Client Sample ID: FS2.1

Date Collected: 10/28/22 08:30
Date Received: 10/28/22 12:13
Sample Depth: 2

Lab Sample ID: 890-3319-1
Matrix: Solid

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00202	U	0.00202		mg/Kg		11/01/22 15:07	11/02/22 11:15	1
Toluene	<0.00202	U	0.00202		mg/Kg		11/01/22 15:07	11/02/22 11:15	1
Ethylbenzene	<0.00202	U	0.00202		mg/Kg		11/01/22 15:07	11/02/22 11:15	1
m-Xylene & p-Xylene	<0.00403	U	0.00403		mg/Kg		11/01/22 15:07	11/02/22 11:15	1
o-Xylene	<0.00202	U	0.00202		mg/Kg		11/01/22 15:07	11/02/22 11:15	1
Xylenes, Total	<0.00403	U	0.00403		mg/Kg		11/01/22 15:07	11/02/22 11:15	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*100*		*70 - 130*	*11/01/22 15:07*	*11/02/22 11:15*	*1*
1,4-Difluorobenzene (Surr)	*102*		*70 - 130*	*11/01/22 15:07*	*11/02/22 11:15*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00403	U	0.00403		mg/Kg			11/02/22 14:29	1

Method: SW846 8015 NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0		mg/Kg			11/01/22 13:05	1

Method: SW846 8015B NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		10/31/22 10:25	10/31/22 17:05	1
Diesel Range Organics (Over C10-C28)	<50.0	U *+	50.0		mg/Kg		10/31/22 10:25	10/31/22 17:05	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		10/31/22 10:25	10/31/22 17:05	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*82*		*70 - 130*	*10/31/22 10:25*	*10/31/22 17:05*	*1*
o-Terphenyl	*93*		*70 - 130*	*10/31/22 10:25*	*10/31/22 17:05*	*1*

Method: MCAWW 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**151**		5.01		mg/Kg			11/01/22 22:45	1

Client Sample ID: FS8.1

Date Collected: 10/28/22 08:32
Date Received: 10/28/22 12:13
Sample Depth: 8

Lab Sample ID: 890-3319-2
Matrix: Solid

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00201	U	0.00201		mg/Kg		11/01/22 15:13	11/02/22 11:20	1
Toluene	<0.00201	U	0.00201		mg/Kg		11/01/22 15:13	11/02/22 11:20	1
Ethylbenzene	<0.00201	U	0.00201		mg/Kg		11/01/22 15:13	11/02/22 11:20	1
m-Xylene & p-Xylene	<0.00402	U F1	0.00402		mg/Kg		11/01/22 15:13	11/02/22 11:20	1
o-Xylene	<0.00201	U	0.00201		mg/Kg		11/01/22 15:13	11/02/22 11:20	1
Xylenes, Total	<0.00402	U	0.00402		mg/Kg		11/01/22 15:13	11/02/22 11:20	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*108*		*70 - 130*	*11/01/22 15:13*	*11/02/22 11:20*	*1*

Client Sample Results

Client: Terracon Consulting Eng & Scientists
Project/Site: Akman #001

Job ID: 890-3319-1

Client Sample ID: FS8.1

Date Collected: 10/28/22 08:32
Date Received: 10/28/22 12:13
Sample Depth: 8

Lab Sample ID: 890-3319-2

Matrix: Solid

Method: SW846 8021B - Volatile Organic Compounds (GC) (Continued)

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Difluorobenzene (Surr)	*97*		*70 - 130*	*11/01/22 15:13*	*11/02/22 11:20*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00402	U	0.00402		mg/Kg			11/02/22 14:26	1

Method: SW846 8015 NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.8	U	49.8		mg/Kg			11/01/22 13:05	1

Method: SW846 8015B NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.8	U	49.8		mg/Kg		10/31/22 10:25	10/31/22 17:27	1
Diesel Range Organics (Over C10-C28)	<49.8	U *+	49.8		mg/Kg		10/31/22 10:25	10/31/22 17:27	1
Oil Range Organics (Over C28-C36)	<49.8	U	49.8		mg/Kg		10/31/22 10:25	10/31/22 17:27	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*85*		*70 - 130*	*10/31/22 10:25*	*10/31/22 17:27*	*1*
o-Terphenyl	*94*		*70 - 130*	*10/31/22 10:25*	*10/31/22 17:27*	*1*

Method: MCAWW 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**89.4**		4.99		mg/Kg			11/01/22 23:00	1

Surrogate Summary

Client: Terracon Consulting Eng & Scientists
Project/Site: Akman #001

Job ID: 890-3319-1

Method: 8021B - Volatile Organic Compounds (GC)

Matrix: Solid **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)	
Lab Sample ID	Client Sample ID	BFB1 (70-130)	DFBZ1 (70-130)
890-3319-1	FS2.1	100	102
890-3319-1 MS	FS2.1	94	106
890-3319-1 MSD	FS2.1	99	108
890-3319-2	FS8.1	108	97
890-3319-2 MS	FS8.1	92	97
890-3319-2 MSD	FS8.1	87	101
LCS 880-38415/1-A	Lab Control Sample	91	105
LCS 880-38419/1-A	Lab Control Sample	83	95
LCSD 880-38415/2-A	Lab Control Sample Dup	93	110
LCSD 880-38419/2-A	Lab Control Sample Dup	78	101
MB 880-38415/5-A	Method Blank	85	94
MB 880-38419/5-A	Method Blank	103	96

Surrogate Legend

BFB = 4-Bromofluorobenzene (Surr)
DFBZ = 1,4-Difluorobenzene (Surr)

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

Matrix: Solid **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)	
Lab Sample ID	Client Sample ID	1CO1 (70-130)	OTPH1 (70-130)
890-3319-1	FS2.1	82	93
890-3319-2	FS8.1	85	94
LCS 880-38261/2-A	Lab Control Sample	131 S1+	146 S1+
LCSD 880-38261/3-A	Lab Control Sample Dup	133 S1+	148 S1+
MB 880-38261/1-A	Method Blank	87	99

Surrogate Legend

1CO = 1-Chlorooctane
OTPH = o-Terphenyl

QC Sample Results

Client: Terracon Consulting Eng & Scientists
Project/Site: Akman #001

Job ID: 890-3319-1

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-38415/5-A
Matrix: Solid
Analysis Batch: 38442

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 38415

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		11/01/22 15:07	11/02/22 10:53	1
Toluene	<0.00200	U	0.00200		mg/Kg		11/01/22 15:07	11/02/22 10:53	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		11/01/22 15:07	11/02/22 10:53	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		11/01/22 15:07	11/02/22 10:53	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		11/01/22 15:07	11/02/22 10:53	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		11/01/22 15:07	11/02/22 10:53	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*85*		*70 - 130*	*11/01/22 15:07*	*11/02/22 10:53*	*1*
1,4-Difluorobenzene (Surr)	*94*		*70 - 130*	*11/01/22 15:07*	*11/02/22 10:53*	*1*

Lab Sample ID: LCS 880-38415/1-A
Matrix: Solid
Analysis Batch: 38442

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 38415

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	0.100	0.1004		mg/Kg		100	70 - 130
Toluene	0.100	0.08754		mg/Kg		88	70 - 130
Ethylbenzene	0.100	0.08210		mg/Kg		82	70 - 130
m-Xylene & p-Xylene	0.200	0.1676		mg/Kg		84	70 - 130
o-Xylene	0.100	0.08632		mg/Kg		86	70 - 130

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*91*		*70 - 130*
1,4-Difluorobenzene (Surr)	*105*		*70 - 130*

Lab Sample ID: LCSD 880-38415/2-A
Matrix: Solid
Analysis Batch: 38442

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 38415

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	0.100	0.1038		mg/Kg		104	70 - 130	3	35
Toluene	0.100	0.08958		mg/Kg		90	70 - 130	2	35
Ethylbenzene	0.100	0.08377		mg/Kg		84	70 - 130	2	35
m-Xylene & p-Xylene	0.200	0.1698		mg/Kg		85	70 - 130	1	35
o-Xylene	0.100	0.08507		mg/Kg		85	70 - 130	1	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*93*		*70 - 130*
1,4-Difluorobenzene (Surr)	*110*		*70 - 130*

Lab Sample ID: 890-3319-1 MS
Matrix: Solid
Analysis Batch: 38442

Client Sample ID: FS2.1
Prep Type: Total/NA
Prep Batch: 38415

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	<0.00202	U	0.0998	0.09552		mg/Kg		96	70 - 130
Toluene	<0.00202	U	0.0998	0.08259		mg/Kg		82	70 - 130

QC Sample Results

Client: Terracon Consulting Eng & Scientists
Project/Site: Akman #001

Job ID: 890-3319-1

Method: 8021B - Volatile Organic Compounds (GC) (Continued)

Lab Sample ID: 890-3319-1 MS
Matrix: Solid
Analysis Batch: 38442

Client Sample ID: FS2.1
Prep Type: Total/NA
Prep Batch: 38415

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Ethylbenzene	<0.00202	U	0.0998	0.07590		mg/Kg		76	70 - 130
m-Xylene & p-Xylene	<0.00403	U	0.200	0.1548		mg/Kg		78	70 - 130
o-Xylene	<0.00202	U	0.0998	0.07740		mg/Kg		78	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*94*		*70 - 130*
1,4-Difluorobenzene (Surr)	*106*		*70 - 130*

Lab Sample ID: 890-3319-1 MSD
Matrix: Solid
Analysis Batch: 38442

Client Sample ID: FS2.1
Prep Type: Total/NA
Prep Batch: 38415

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	<0.00202	U	0.0990	0.09441		mg/Kg		95	70 - 130	1	35
Toluene	<0.00202	U	0.0990	0.07862		mg/Kg		79	70 - 130	5	35
Ethylbenzene	<0.00202	U	0.0990	0.07386		mg/Kg		75	70 - 130	3	35
m-Xylene & p-Xylene	<0.00403	U	0.198	0.1485		mg/Kg		75	70 - 130	4	35
o-Xylene	<0.00202	U	0.0990	0.07377		mg/Kg		75	70 - 130	5	35

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*99*		*70 - 130*
1,4-Difluorobenzene (Surr)	*108*		*70 - 130*

Lab Sample ID: MB 880-38419/5-A
Matrix: Solid
Analysis Batch: 38443

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 38419

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		11/01/22 15:13	11/02/22 10:59	1
Toluene	<0.00200	U	0.00200		mg/Kg		11/01/22 15:13	11/02/22 10:59	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		11/01/22 15:13	11/02/22 10:59	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		11/01/22 15:13	11/02/22 10:59	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		11/01/22 15:13	11/02/22 10:59	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		11/01/22 15:13	11/02/22 10:59	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*103*		*70 - 130*	*11/01/22 15:13*	*11/02/22 10:59*	*1*
1,4-Difluorobenzene (Surr)	*96*		*70 - 130*	*11/01/22 15:13*	*11/02/22 10:59*	*1*

Lab Sample ID: LCS 880-38419/1-A
Matrix: Solid
Analysis Batch: 38443

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 38419

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	0.100	0.08829		mg/Kg		88	70 - 130
Toluene	0.100	0.09041		mg/Kg		90	70 - 130
Ethylbenzene	0.100	0.08814		mg/Kg		88	70 - 130
m-Xylene & p-Xylene	0.200	0.1644		mg/Kg		82	70 - 130

QC Sample Results

Client: Terracon Consulting Eng & Scientists
Project/Site: Akman #001

Job ID: 890-3319-1

Method: 8021B - Volatile Organic Compounds (GC) (Continued)

Lab Sample ID: LCS 880-38419/1-A
Matrix: Solid
Analysis Batch: 38443

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 38419

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
o-Xylene			0.100	0.09396		mg/Kg		94	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*83*		*70 - 130*
1,4-Difluorobenzene (Surr)	*95*		*70 - 130*

Lab Sample ID: LCSD 880-38419/2-A
Matrix: Solid
Analysis Batch: 38443

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 38419

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene			0.100	0.08867		mg/Kg		89	70 - 130	0	35
Toluene			0.100	0.08886		mg/Kg		89	70 - 130	2	35
Ethylbenzene			0.100	0.08311		mg/Kg		83	70 - 130	6	35
m-Xylene & p-Xylene			0.200	0.1522		mg/Kg		76	70 - 130	8	35
o-Xylene			0.100	0.08579		mg/Kg		86	70 - 130	9	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*78*		*70 - 130*
1,4-Difluorobenzene (Surr)	*101*		*70 - 130*

Lab Sample ID: 890-3319-2 MS
Matrix: Solid
Analysis Batch: 38443

Client Sample ID: FS8.1
Prep Type: Total/NA
Prep Batch: 38419

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene	<0.00201	U	0.0998	0.08073		mg/Kg		80	70 - 130		
Toluene	<0.00201	U	0.0998	0.08353		mg/Kg		84	70 - 130		
Ethylbenzene	<0.00201	U	0.0998	0.07974		mg/Kg		80	70 - 130		
m-Xylene & p-Xylene	<0.00402	U F1	0.200	0.1521		mg/Kg		76	70 - 130		
o-Xylene	<0.00201	U	0.0998	0.08611		mg/Kg		86	70 - 130		

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*92*		*70 - 130*
1,4-Difluorobenzene (Surr)	*97*		*70 - 130*

Lab Sample ID: 890-3319-2 MSD
Matrix: Solid
Analysis Batch: 38443

Client Sample ID: FS8.1
Prep Type: Total/NA
Prep Batch: 38419

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	<0.00201	U	0.0990	0.07868		mg/Kg		78	70 - 130	3	35
Toluene	<0.00201	U	0.0990	0.07973		mg/Kg		81	70 - 130	5	35
Ethylbenzene	<0.00201	U	0.0990	0.07266		mg/Kg		73	70 - 130	9	35
m-Xylene & p-Xylene	<0.00402	U F1	0.198	0.1342	F1	mg/Kg		68	70 - 130	12	35
o-Xylene	<0.00201	U	0.0990	0.07432		mg/Kg		75	70 - 130	15	35

QC Sample Results

Client: Terracon Consulting Eng & Scientists
Project/Site: Akman #001

Job ID: 890-3319-1

Method: 8021B - Volatile Organic Compounds (GC) (Continued)

Lab Sample ID: 890-3319-2 MSD
Matrix: Solid
Analysis Batch: 38443

Client Sample ID: FS8.1
Prep Type: Total/NA
Prep Batch: 38419

Surrogate	MSD %Recovery	MSD Qualifier	Limits
4-Bromofluorobenzene (Surr)	87		70 - 130
1,4-Difluorobenzene (Surr)	101		70 - 130

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

Lab Sample ID: MB 880-38261/1-A
Matrix: Solid
Analysis Batch: 38217

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 38261

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		10/31/22 10:25	10/31/22 09:53	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		10/31/22 10:25	10/31/22 09:53	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		10/31/22 10:25	10/31/22 09:53	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	87		70 - 130	10/31/22 10:25	10/31/22 09:53	1
o-Terphenyl	99		70 - 130	10/31/22 10:25	10/31/22 09:53	1

Lab Sample ID: LCS 880-38261/2-A
Matrix: Solid
Analysis Batch: 38217

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 38261

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Gasoline Range Organics (GRO)-C6-C10			1000	903.3		mg/Kg		90	70 - 130		
Diesel Range Organics (Over C10-C28)			1000	1384	*+	mg/Kg		138	70 - 130		

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1-Chlorooctane	131	S1+	70 - 130
o-Terphenyl	146	S1+	70 - 130

Lab Sample ID: LCSD 880-38261/3-A
Matrix: Solid
Analysis Batch: 38217

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 38261

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			1000	944.8		mg/Kg		94	70 - 130	4	20
Diesel Range Organics (Over C10-C28)			1000	1439	*+	mg/Kg		144	70 - 130	4	20

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
1-Chlorooctane	133	S1+	70 - 130
o-Terphenyl	148	S1+	70 - 130

QC Sample Results

Client: Terracon Consulting Eng & Scientists
Project/Site: Akman #001

Job ID: 890-3319-1

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-38262/1-A
Matrix: Solid
Analysis Batch: 38428

Client Sample ID: Method Blank
Prep Type: Soluble

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00	U	5.00		mg/Kg			11/01/22 22:29	1

Lab Sample ID: LCS 880-38262/2-A
Matrix: Solid
Analysis Batch: 38428

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride			250	262.5		mg/Kg		105	90 - 110		

Lab Sample ID: LCSD 880-38262/3-A
Matrix: Solid
Analysis Batch: 38428

Client Sample ID: Lab Control Sample Dup
Prep Type: Soluble

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride			250	265.5		mg/Kg		106	90 - 110	1	20

Lab Sample ID: 890-3319-1 MS
Matrix: Solid
Analysis Batch: 38428

Client Sample ID: FS2.1
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride	151		251	401.6		mg/Kg		100	90 - 110		

Lab Sample ID: 890-3319-1 MSD
Matrix: Solid
Analysis Batch: 38428

Client Sample ID: FS2.1
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	151		251	394.5		mg/Kg		97	90 - 110	2	20

QC Association Summary

Client: Terracon Consulting Eng & Scientists Job ID: 890-3319-1
Project/Site: Akman #001

GC VOA

Prep Batch: 38415

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3319-1	FS2.1	Total/NA	Solid	5035	
MB 880-38415/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-38415/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-38415/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
890-3319-1 MS	FS2.1	Total/NA	Solid	5035	
890-3319-1 MSD	FS2.1	Total/NA	Solid	5035	

Prep Batch: 38419

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3319-2	FS8.1	Total/NA	Solid	5035	
MB 880-38419/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-38419/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-38419/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
890-3319-2 MS	FS8.1	Total/NA	Solid	5035	
890-3319-2 MSD	FS8.1	Total/NA	Solid	5035	

Analysis Batch: 38442

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3319-1	FS2.1	Total/NA	Solid	8021B	38415
MB 880-38415/5-A	Method Blank	Total/NA	Solid	8021B	38415
LCS 880-38415/1-A	Lab Control Sample	Total/NA	Solid	8021B	38415
LCSD 880-38415/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	38415
890-3319-1 MS	FS2.1	Total/NA	Solid	8021B	38415
890-3319-1 MSD	FS2.1	Total/NA	Solid	8021B	38415

Analysis Batch: 38443

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3319-2	FS8.1	Total/NA	Solid	8021B	38419
MB 880-38419/5-A	Method Blank	Total/NA	Solid	8021B	38419
LCS 880-38419/1-A	Lab Control Sample	Total/NA	Solid	8021B	38419
LCSD 880-38419/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	38419
890-3319-2 MS	FS8.1	Total/NA	Solid	8021B	38419
890-3319-2 MSD	FS8.1	Total/NA	Solid	8021B	38419

Analysis Batch: 38515

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3319-1	FS2.1	Total/NA	Solid	Total BTEX	
890-3319-2	FS8.1	Total/NA	Solid	Total BTEX	

GC Semi VOA

Analysis Batch: 38217

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3319-1	FS2.1	Total/NA	Solid	8015B NM	38261
890-3319-2	FS8.1	Total/NA	Solid	8015B NM	38261
MB 880-38261/1-A	Method Blank	Total/NA	Solid	8015B NM	38261
LCS 880-38261/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	38261
LCSD 880-38261/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	38261

QC Association Summary

Client: Terracon Consulting Eng & Scientists
Project/Site: Akman #001

Job ID: 890-3319-1

GC Semi VOA

Prep Batch: 38261

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3319-1	FS2.1	Total/NA	Solid	8015NM Prep	
890-3319-2	FS8.1	Total/NA	Solid	8015NM Prep	
MB 880-38261/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-38261/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-38261/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	

Analysis Batch: 38390

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3319-1	FS2.1	Total/NA	Solid	8015 NM	
890-3319-2	FS8.1	Total/NA	Solid	8015 NM	

HPLC/IC

Leach Batch: 38262

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3319-1	FS2.1	Soluble	Solid	DI Leach	
890-3319-2	FS8.1	Soluble	Solid	DI Leach	
MB 880-38262/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-38262/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-38262/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-3319-1 MS	FS2.1	Soluble	Solid	DI Leach	
890-3319-1 MSD	FS2.1	Soluble	Solid	DI Leach	

Analysis Batch: 38428

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3319-1	FS2.1	Soluble	Solid	300.0	38262
890-3319-2	FS8.1	Soluble	Solid	300.0	38262
MB 880-38262/1-A	Method Blank	Soluble	Solid	300.0	38262
LCS 880-38262/2-A	Lab Control Sample	Soluble	Solid	300.0	38262
LCSD 880-38262/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	38262
890-3319-1 MS	FS2.1	Soluble	Solid	300.0	38262
890-3319-1 MSD	FS2.1	Soluble	Solid	300.0	38262

Lab Chronicle

Client: Terracon Consulting Eng & Scientists
Project/Site: Akman #001

Job ID: 890-3319-1

Client Sample ID: FS2.1

Date Collected: 10/28/22 08:30
Date Received: 10/28/22 12:13

Lab Sample ID: 890-3319-1
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.96 g	5 mL	38415	11/01/22 15:07	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	38442	11/02/22 11:15	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			38515	11/02/22 14:29	SM	EET MID
Total/NA	Analysis	8015 NM		1			38390	11/01/22 13:05	AJ	EET MID
Total/NA	Prep	8015NM Prep			10.00 g	10 mL	38261	10/31/22 10:25	AM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	38217	10/31/22 17:05	AJ	EET MID
Soluble	Leach	DI Leach			4.99 g	50 mL	38262	10/31/22 10:26	CH	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	38428	11/01/22 22:45	CH	EET MID

Client Sample ID: FS8.1

Date Collected: 10/28/22 08:32
Date Received: 10/28/22 12:13

Lab Sample ID: 890-3319-2
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.97 g	5 mL	38419	11/01/22 15:13	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	38443	11/02/22 11:20	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			38515	11/02/22 14:26	SM	EET MID
Total/NA	Analysis	8015 NM		1			38390	11/01/22 13:05	AJ	EET MID
Total/NA	Prep	8015NM Prep			10.04 g	10 mL	38261	10/31/22 10:25	AM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	38217	10/31/22 17:27	AJ	EET MID
Soluble	Leach	DI Leach			5.01 g	50 mL	38262	10/31/22 10:26	CH	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	38428	11/01/22 23:00	CH	EET MID

Laboratory References:
EET MID = Eurofins Midland, 1211 W. Florida Ave, Midland, TX 79701, TEL (432)704-5440

Accreditation/Certification Summary

Client: Terracon Consulting Eng & Scientists Job ID: 890-3319-1
Project/Site: Akman #001

Laboratory: Eurofins Midland

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
Texas	NELAP	T104704400-22-24	06-30-23

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
8015 NM		Solid	Total TPH
Total BTEX		Solid	Total BTEX

Method Summary

Client: Terracon Consulting Eng & Scientists
Project/Site: Akman #001

Job ID: 890-3319-1

Method	Method Description	Protocol	Laboratory
8021B	Volatile Organic Compounds (GC)	SW846	EET MID
Total BTEX	Total BTEX Calculation	TAL SOP	EET MID
8015 NM	Diesel Range Organics (DRO) (GC)	SW846	EET MID
8015B NM	Diesel Range Organics (DRO) (GC)	SW846	EET MID
300.0	Anions, Ion Chromatography	MCAWW	EET MID
5035	Closed System Purge and Trap	SW846	EET MID
8015NM Prep	Microextraction	SW846	EET MID
DI Leach	Deionized Water Leaching Procedure	ASTM	EET MID

Protocol References:

ASTM = ASTM International

MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions.

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

TAL SOP = TestAmerica Laboratories, Standard Operating Procedure

Laboratory References:

EET MID = Eurofins Midland, 1211 W. Florida Ave, Midland, TX 79701, TEL (432)704-5440

Sample Summary

Client: Terracon Consulting Eng & Scientists
Project/Site: Akman #001

Job ID: 890-3319-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-3319-1	FS2.1	Solid	10/28/22 08:30	10/28/22 12:13	2
890-3319-2	FS8.1	Solid	10/28/22 08:32	10/28/22 12:13	8

Page 439 of 472

CHAIN OF CUSTOCY RECORD

Page 1 of 1

Terracon

Laboratory:
Address:

Office Location: 4502 W. Pierce St Carlsbad NM, 88220
Phone:
Contact:
Project Manager: Mike Adams
SRS #:
Sampler's Name: Travis Casey
Sampler's Signature

Project Number
Project Name: A. Kyman #001

ANALYSIS REQUEST

LAB USE ONLYDUE DATE:

TEMP OF COOLER WHEN RECEIVED (°C): 5.0/4.8 TNM-0.2

Matrix	Date	Time	Comp	Grab	Identifying Marks of Sample(s)	Start Depth	End Depth	No. Type of Containers: 4 oz Glass	2 oz Glass	250 ml Poly	Chloride (EPA Method 300)	TPH Extended 8015	BTEX (EPA Method 8021B)	Lab Sample ID
S	10/28	0830	C		FS 2.1	0	2'	1			X	X	X	
S	10/28	0832	C		FS 8.1	0	8'	1			X	X	X	

890-3319 Chain of Custody

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

Relinquished by (Signature)	Date:	Time:	Received by (Signature)	Date:	Time:
	10/28				
Relinquished by (Signature)	Date:	Time:	Received by (Signature)	Date:	Time:
	10/28	1213			
Relinquished by (Signature)	Date:	Time:	Received by (Signature)	Date:	Time:
Relinquished by (Signature)	Date:	Time:	Received by (Signature)	Date:	Time:

Bill To:

e-mail results to:
joseph.guenther@terraconc.com
travis.casey@terracon.com
mike.adams@terracon.com

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

Received by OCD: 4/10/2023 1:07:45 PM
Released to Imaging: 8/29/2023 1:29:02 PM
11/3/2022
Page 20 of 22

Login Sample Receipt Checklist

Client: Terracon Consulting Eng & Scientists Job Number: 890-3319-1

Login Number: 3319 **List Source: Eurofins Carlsbad**
List Number: 1
Creator: Clifton, Cloe

Question	Answer	Comment
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	N/A	Refer to Job Narrative for details.
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	

Login Sample Receipt Checklist

Client: Terracon Consulting Eng & Scientists Job Number: 890-3319-1

Login Number: 3319
List Number: 2
Creator: Rodriguez, Leticia

List Source: Eurofins Midland
List Creation: 10/31/22 09:20 AM

Question	Answer	Comment
The cooler's custody seal, if present, is intact.	N/A	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

December 02, 2022

JOSEPH GUESNIER

TERRACON CONSULTANTS

5827 50TH ST. SUITE 1

LUBBOCK, TX 79424

RE: AIKMAN SWD

Enclosed are the results of analyses for samples received by the laboratory on 11/30/22 16:15.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-22-15. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (*). For a complete list of accredited analytes and matrices visit the TCEQ website at www.tceq.texas.gov/field/qa/lab_accred_certif.html.

Cardinal Laboratories is accreditated through the State of Colorado Department of Public Health and Environment for:

Method EPA 552.2	Haloacetic Acids (HAA-5)
Method EPA 524.2	Total Trihalomethanes (TTHM)
Method EPA 524.4	Regulated VOCs (V1, V2, V3)

Accreditation applies to public drinking water matrices.

This report meets NELAP requirements and is made up of a cover page, analytical results, and a copy of the original chain-of-custody. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Celey D. Keene

Celey D. Keene

Lab Director/Quality Manager

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

TERRACON CONSULTANTS
JOSEPH GUESNIER
5827 50TH ST. SUITE 1
LUBBOCK TX, 79424
Fax To:

Received:	11/30/2022	Sampling Date:	11/30/2022
Reported:	12/02/2022	Sampling Type:	Soil
Project Name:	AIKMAN SWD	Sampling Condition:	Cool & Intact
Project Number:	AR207018	Sample Received By:	Tamara Oldaker
Project Location:	SPUR ENERGY		

Sample ID: E- 2.2 (2-3) (H225616-01)

BTEX 8021B mg/kg **Analyzed By: JH/**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	12/01/2022	ND	1.86	93.2	2.00	10.5	
Toluene*	<0.050	0.050	12/01/2022	ND	2.06	103	2.00	9.73	
Ethylbenzene*	<0.050	0.050	12/01/2022	ND	2.12	106	2.00	9.19	
Total Xylenes*	<0.150	0.150	12/01/2022	ND	6.50	108	6.00	8.79	
Total BTEX	<0.300	0.300	12/01/2022	ND					

Surrogate: 4-Bromofluorobenzene (PID *108 %* *69.9-140*

TPH 8015M mg/kg **Analyzed By: MS**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	12/01/2022	ND	195	97.4	200	0.106	
DRO >C10-C28*	<10.0	10.0	12/01/2022	ND	182	90.8	200	1.62	
EXT DRO >C28-C36	<10.0	10.0	12/01/2022	ND					

Surrogate: 1-Chlorooctane *97.7 %* *45.3-161*

Surrogate: 1-Chlorooctadecane *104 %* *46.3-178*

Cardinal Laboratories *=Accredited Analyte

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Celey D. Keene

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

TERRACON CONSULTANTS
JOSEPH GUESNIER
5827 50TH ST. SUITE 1
LUBBOCK TX, 79424
Fax To:

Received:	11/30/2022	Sampling Date:	11/30/2022
Reported:	12/02/2022	Sampling Type:	Soil
Project Name:	AIKMAN SWD	Sampling Condition:	Cool & Intact
Project Number:	AR207018	Sample Received By:	Tamara Oldaker
Project Location:	SPUR ENERGY		

Sample ID: TN- 1.2 (1-2) (H225616-02)

BTEX 8021B mg/kg Analyzed By: JH/

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	12/01/2022	ND	1.86	93.2	2.00	10.5	
Toluene*	<0.050	0.050	12/01/2022	ND	2.06	103	2.00	9.73	
Ethylbenzene*	<0.050	0.050	12/01/2022	ND	2.12	106	2.00	9.19	
Total Xylenes*	<0.150	0.150	12/01/2022	ND	6.50	108	6.00	8.79	
Total BTEX	<0.300	0.300	12/01/2022	ND					

Surrogate: 4-Bromofluorobenzene (PID *109 %* *69.9-140*

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	12/01/2022	ND	195	97.4	200	0.106	
DRO >C10-C28*	<10.0	10.0	12/01/2022	ND	182	90.8	200	1.62	
EXT DRO >C28-C36	<10.0	10.0	12/01/2022	ND					

Surrogate: 1-Chlorooctane *94.1 %* *45.3-161*

Surrogate: 1-Chlorooctadecane *99.2 %* *46.3-178*

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Celey D. Keene

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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Analytical Results For:

TERRACON CONSULTANTS
JOSEPH GUESNIER
5827 50TH ST. SUITE 1
LUBBOCK TX, 79424
Fax To:

Received:	11/30/2022	Sampling Date:	11/30/2022
Reported:	12/02/2022	Sampling Type:	Soil
Project Name:	AIKMAN SWD	Sampling Condition:	Cool & Intact
Project Number:	AR207018	Sample Received By:	Tamara Oldaker
Project Location:	SPUR ENERGY		

Sample ID: TN- 2.2 (1-2) (H225616-03)

BTEX 8021B mg/kg **Analyzed By: JH**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	12/01/2022	ND	1.76	87.9	2.00	10.1	
Toluene*	<0.050	0.050	12/01/2022	ND	2.00	100	2.00	9.75	
Ethylbenzene*	<0.050	0.050	12/01/2022	ND	2.06	103	2.00	9.90	
Total Xylenes*	<0.150	0.150	12/01/2022	ND	6.35	106	6.00	9.52	
Total BTEX	<0.300	0.300	12/01/2022	ND					

Surrogate: 4-Bromofluorobenzene (PID *102 %* *69.9-140*

TPH 8015M mg/kg **Analyzed By: MS**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	12/01/2022	ND	195	97.4	200	0.106	
DRO >C10-C28*	<10.0	10.0	12/01/2022	ND	182	90.8	200	1.62	
EXT DRO >C28-C36	<10.0	10.0	12/01/2022	ND					

Surrogate: 1-Chlorooctane *92.7 %* *45.3-161*

Surrogate: 1-Chlorooctadecane *99.3 %* *46.3-178*

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Celey D. Keene

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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Analytical Results For:

TERRACON CONSULTANTS
JOSEPH GUESNIER
5827 50TH ST. SUITE 1
LUBBOCK TX, 79424
Fax To:

Received:	11/30/2022	Sampling Date:	11/30/2022
Reported:	12/02/2022	Sampling Type:	Soil
Project Name:	AIKMAN SWD	Sampling Condition:	Cool & Intact
Project Number:	AR207018	Sample Received By:	Tamara Oldaker
Project Location:	SPUR ENERGY		

Sample ID: TS- 2.2 (1-2) (H225616-04)

BTEX 8021B mg/kg **Analyzed By: JH**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	12/01/2022	ND	1.76	87.9	2.00	10.1	
Toluene*	<0.050	0.050	12/01/2022	ND	2.00	100	2.00	9.75	
Ethylbenzene*	<0.050	0.050	12/01/2022	ND	2.06	103	2.00	9.90	
Total Xylenes*	<0.150	0.150	12/01/2022	ND	6.35	106	6.00	9.52	
Total BTEX	<0.300	0.300	12/01/2022	ND					

Surrogate: 4-Bromofluorobenzene (PID *102 %* *69.9-140*

TPH 8015M mg/kg **Analyzed By: MS**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	12/01/2022	ND	195	97.4	200	0.106	
DRO >C10-C28*	<10.0	10.0	12/01/2022	ND	182	90.8	200	1.62	
EXT DRO >C28-C36	<10.0	10.0	12/01/2022	ND					

Surrogate: 1-Chlorooctane *93.2 %* *45.3-161*

Surrogate: 1-Chlorooctadecane *99.2 %* *46.3-178*

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Celey D. Keene

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Notes and Definitions

BS-3	Blank spike recovery outside of lab established statistical limits, but still within method limits. Data is not adversely affected.
ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C
	Samples reported on an as received basis (wet) unless otherwise noted on report

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Celey D. Keene, Lab Director/Quality Manager

CHAIN OF CUSTODY RECORD

Terracon

Laboratory:
Address:

Office Location _____
Phone:
Contact: _____
Project Manager J. Guesnier
SRS #:
Sampler's Name A. Adams
Sampler's Signature

ANALYSIS REQUESTED

LAB USE ONLY
DUE DATE: #113

TEMP OF COOLER WHEN RECEIVED (°C) 5.4°/4.8°

Page _1__ of _1__

Project Number: AR207018
Project Name: Aikman SWD

Matrix	Date	Time	Comp	Grab	Identifying Marks of Sample(s)	Start Depth	End Depth	No. Type of Containers: 4 oz Glass				TPH Extended 8015	BTEX (EPA Method 8021B)	Chloride (EPA Method 300)	Hold				Lab Sample ID
S	11/30/2022	13:50	X		E-2.2 (2-3)	2'	3'	X				X	X						H225616-01
S	11/30/2022	13:45	X		TN-1.2 (1-2)	1'	2'	X				X	X						02
S	11/30/2022	11:10	X		TN-2.2 (1-2)	1'	2'	X				X	X						03
S	11/30/2022	11:15	X		TS-2.2 (1-2)	1'	2'	X				X	X						04

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

TRRP-Laboratory Review Checklist ☐ Yes ☐ No

Relinquished by (Signature)	Date:	Time:	Received by (Signature)	Date:	Time:
	11-30-22	16:15		11-30-22	1615

Bill To: Spur Energy Partners

e-mail results to:
joseph.guesnier@terraconc.om
austin.worley@terracon.com

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

Received by OCD: 4/10/2023 1:07:45 PM

Released to Imaging: 8/29/2023 1:29:02 PM

eurofins | Environment Testing

ANALYTICAL REPORT

PREPARED FOR

Attn: Joseph Guesnier
Terracon Consulting Eng & Scientists
5847 50th St
Lubbock, Texas 79424

Generated 12/5/2022 2:59:09 PM

JOB DESCRIPTION

Aikman
SDG NUMBER AR207018

JOB NUMBER

890-3560-1

Eurofins Carlsbad
1089 N Canal St.
Carlsbad NM 88220

See page two for job notes and contact information.

Released to Imaging: 8/29/2023 1:29:02 PM

my EOL

Eurofins Carlsbad

Job Notes

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis.

Authorization

Generated
12/5/2022 2:59:09 PM

Authorized for release by
Jessica Kramer, Project Manager
Jessica.Kramer@et.eurofinsus.com
(432)704-5440

Eurofins Carlsbad

Compliance Statement

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

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

Warranties, Terms, and Conditions
· Analyses for Field Parameters are performed by Eurofins Philadelphia field staff. Locations and certifications are identified on the Chain of Custody as follows:

ERF = field staff performs tests under NJ State certification #02015
VL = field staff performs tests under NJ State certification #06005
WG = field staff performs tests under NJ State certification #PA001
H = field staff performs tests under NJ NELAP certification #PA093, PA NELAP certification # 46-05499

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

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

· All samples are collected as "grab" samples unless otherwise identified.

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

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

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

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



Released to Imaging: 8/29/2023 1:29:02 PM

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Definitions/Glossary

Client: Terracon Consulting Eng & Scientists
Project/Site: Aikman

Job ID: 890-3560-1
SDG: AR207018

Qualifiers

GC VOA

Qualifier	Qualifier Description
S1-	Surrogate recovery exceeds control limits, low biased.
U	Indicates the analyte was analyzed for but not detected.

GC Semi VOA

Qualifier	Qualifier Description
S1-	Surrogate recovery exceeds control limits, low biased.
S1+	Surrogate recovery exceeds control limits, high biased.
U	Indicates the analyte was analyzed for but not detected.

HPLC/IC

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.

Glossary

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

Case Narrative

Client: Terracon Consulting Eng & Scientists
Project/Site: Aikman

Job ID: 890-3560-1
SDG: AR207018

Job ID: 890-3560-1

Laboratory: Eurofins Carlsbad

Narrative

Job Narrative
890-3560-1

Receipt
The sample was received on 11/23/2022 11:28 AM. Unless otherwise noted below, the sample arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 12.0°C

Receipt Exceptions
The following samples were received and analyzed from an unpreserved bulk soil jar: FS .91 (890-3560-1).

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

GC Semi VOA
Method 8015MOD_NM: Surrogate recovery for the following samples were outside control limits: (CCV 880-40686/5), (LCS 880-40653/2-A) and (LCSD 880-40653/3-A). Evidence of matrix interferences is not obvious.

Method 8015MOD_NM: The surrogate recovery for the blank associated with preparation batch 880-40653 and analytical batch 880-40686 was outside the upper control limits.

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

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

Client Sample Results

Client: Terracon Consulting Eng & Scientists
Project/Site: Aikman

Job ID: 890-3560-1
SDG: AR207018

Client Sample ID: FS .91

Date Collected: 11/23/22 09:20
Date Received: 11/23/22 11:28
Sample Depth: 5

Lab Sample ID: 890-3560-1

Matrix: Solid

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		11/29/22 16:02	12/02/22 19:24	1
Toluene	<0.00199	U	0.00199		mg/Kg		11/29/22 16:02	12/02/22 19:24	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		11/29/22 16:02	12/02/22 19:24	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		11/29/22 16:02	12/02/22 19:24	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		11/29/22 16:02	12/02/22 19:24	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		11/29/22 16:02	12/02/22 19:24	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*118*		*70 - 130*	*11/29/22 16:02*	*12/02/22 19:24*	*1*
1,4-Difluorobenzene (Surr)	*97*		*70 - 130*	*11/29/22 16:02*	*12/02/22 19:24*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398		mg/Kg			12/05/22 14:17	1

Method: SW846 8015 NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0		mg/Kg			12/01/22 12:06	1

Method: SW846 8015B NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		11/30/22 08:30	11/30/22 22:12	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		11/30/22 08:30	11/30/22 22:12	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		11/30/22 08:30	11/30/22 22:12	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*15*	*S1-*	*70 - 130*	*11/30/22 08:30*	*11/30/22 22:12*	*1*
o-Terphenyl	*0.9*	*S1-*	*70 - 130*	*11/30/22 08:30*	*11/30/22 22:12*	*1*

Method: MCAWW 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**129**		24.9		mg/Kg			11/30/22 14:09	5

Surrogate Summary

Client: Terracon Consulting Eng & Scientists
Project/Site: Aikman

Job ID: 890-3560-1
SDG: AR207018

Method: 8021B - Volatile Organic Compounds (GC)

Matrix: Solid **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)	
Lab Sample ID	Client Sample ID	BFB1 (70-130)	DFBZ1 (70-130)
890-3560-1	FS .91	118	97
LCS 880-40625/1-A	Lab Control Sample	105	100
LCSD 880-40625/2-A	Lab Control Sample Dup	104	97
MB 880-40625/5-A	Method Blank	68 S1-	94

Surrogate Legend

BFB = 4-Bromofluorobenzene (Surr)
DFBZ = 1,4-Difluorobenzene (Surr)

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

Matrix: Solid **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)	
Lab Sample ID	Client Sample ID	1CO1 (70-130)	OTPH1 (70-130)
890-3560-1	FS .91	15 S1-	0.9 S1-
LCS 880-40653/2-A	Lab Control Sample	183 S1+	217 S1+
LCSD 880-40653/3-A	Lab Control Sample Dup	170 S1+	200 S1+
MB 880-40653/1-A	Method Blank	116	145 S1+

Surrogate Legend

1CO = 1-Chlorooctane
OTPH = o-Terphenyl

QC Sample Results

Client: Terracon Consulting Eng & Scientists
Project/Site: Aikman

Job ID: 890-3560-1
SDG: AR207018

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-40625/5-A
Matrix: Solid
Analysis Batch: 40842

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 40625

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		11/29/22 16:02	12/02/22 11:45	1
Toluene	<0.00200	U	0.00200		mg/Kg		11/29/22 16:02	12/02/22 11:45	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		11/29/22 16:02	12/02/22 11:45	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		11/29/22 16:02	12/02/22 11:45	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		11/29/22 16:02	12/02/22 11:45	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		11/29/22 16:02	12/02/22 11:45	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*68*	*S1-*	*70 - 130*	*11/29/22 16:02*	*12/02/22 11:45*	*1*
1,4-Difluorobenzene (Surr)	*94*		*70 - 130*	*11/29/22 16:02*	*12/02/22 11:45*	*1*

Lab Sample ID: LCS 880-40625/1-A
Matrix: Solid
Analysis Batch: 40842

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 40625

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene			0.100	0.1252		mg/Kg		125	70 - 130		
Toluene			0.100	0.1206		mg/Kg		121	70 - 130		
Ethylbenzene			0.100	0.1093		mg/Kg		109	70 - 130		
m-Xylene & p-Xylene			0.200	0.2198		mg/Kg		110	70 - 130		
o-Xylene			0.100	0.1069		mg/Kg		107	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*105*		*70 - 130*
1,4-Difluorobenzene (Surr)	*100*		*70 - 130*

Lab Sample ID: LCSD 880-40625/2-A
Matrix: Solid
Analysis Batch: 40842

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 40625

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene			0.100	0.1186		mg/Kg		119	70 - 130	5	35
Toluene			0.100	0.1151		mg/Kg		115	70 - 130	5	35
Ethylbenzene			0.100	0.1044		mg/Kg		104	70 - 130	5	35
m-Xylene & p-Xylene			0.200	0.2094		mg/Kg		105	70 - 130	5	35
o-Xylene			0.100	0.1069		mg/Kg		107	70 - 130	0	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*104*		*70 - 130*
1,4-Difluorobenzene (Surr)	*97*		*70 - 130*

QC Sample Results

Client: Terracon Consulting Eng & Scientists
Project/Site: Aikman

Job ID: 890-3560-1
SDG: AR207018

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

Lab Sample ID: MB 880-40653/1-A
Matrix: Solid
Analysis Batch: 40686

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 40653

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		11/30/22 08:30	11/30/22 14:25	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		11/30/22 08:30	11/30/22 14:25	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		11/30/22 08:30	11/30/22 14:25	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*116*		*70 - 130*	*11/30/22 08:30*	*11/30/22 14:25*	*1*
o-Terphenyl	*145*	*S1+*	*70 - 130*	*11/30/22 08:30*	*11/30/22 14:25*	*1*

Lab Sample ID: LCS 880-40653/2-A
Matrix: Solid
Analysis Batch: 40686

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 40653

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics (GRO)-C6-C10	1000	994.8		mg/Kg		99	70 - 130
Diesel Range Organics (Over C10-C28)	1000	1096		mg/Kg		110	70 - 130

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1-Chlorooctane	*183*	*S1+*	*70 - 130*
o-Terphenyl	*217*	*S1+*	*70 - 130*

Lab Sample ID: LCSD 880-40653/3-A
Matrix: Solid
Analysis Batch: 40686

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 40653

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	1000	834.2		mg/Kg		83	70 - 130	18	20
Diesel Range Organics (Over C10-C28)	1000	993.6		mg/Kg		99	70 - 130	10	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1-Chlorooctane	*170*	*S1+*	*70 - 130*
o-Terphenyl	*200*	*S1+*	*70 - 130*

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-40392/1-A
Matrix: Solid
Analysis Batch: 40643

Client Sample ID: Method Blank
Prep Type: Soluble

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00	U	5.00		mg/Kg			11/30/22 09:23	1

QC Sample Results

Client: Terracon Consulting Eng & Scientists
Project/Site: Aikman

Job ID: 890-3560-1
SDG: AR207018

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: LCS 880-40392/2-A
Matrix: Solid
Analysis Batch: 40643

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	250	251.6		mg/Kg		101	90 - 110

Lab Sample ID: LCSD 880-40392/3-A
Matrix: Solid
Analysis Batch: 40643

Client Sample ID: Lab Control Sample Dup
Prep Type: Soluble

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	250	252.8		mg/Kg		101	90 - 110	0	20

QC Association Summary

Client: Terracon Consulting Eng & Scientists
Project/Site: Aikman

Job ID: 890-3560-1
SDG: AR207018

GC VOA

Prep Batch: 40625

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3560-1	FS .91	Total/NA	Solid	5035	
MB 880-40625/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-40625/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-40625/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	

Analysis Batch: 40842

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3560-1	FS .91	Total/NA	Solid	8021B	40625
MB 880-40625/5-A	Method Blank	Total/NA	Solid	8021B	40625
LCS 880-40625/1-A	Lab Control Sample	Total/NA	Solid	8021B	40625
LCSD 880-40625/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	40625

Analysis Batch: 41055

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3560-1	FS .91	Total/NA	Solid	Total BTEX	

GC Semi VOA

Prep Batch: 40653

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3560-1	FS .91	Total/NA	Solid	8015NM Prep	
MB 880-40653/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-40653/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-40653/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	

Analysis Batch: 40686

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3560-1	FS .91	Total/NA	Solid	8015B NM	40653
MB 880-40653/1-A	Method Blank	Total/NA	Solid	8015B NM	40653
LCS 880-40653/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	40653
LCSD 880-40653/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	40653

Analysis Batch: 40777

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3560-1	FS .91	Total/NA	Solid	8015 NM	

HPLC/IC

Leach Batch: 40392

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3560-1	FS .91	Soluble	Solid	DI Leach	
MB 880-40392/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-40392/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-40392/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	

Analysis Batch: 40643

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3560-1	FS .91	Soluble	Solid	300.0	40392
MB 880-40392/1-A	Method Blank	Soluble	Solid	300.0	40392
LCS 880-40392/2-A	Lab Control Sample	Soluble	Solid	300.0	40392
LCSD 880-40392/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	40392

Lab Chronicle

Client: Terracon Consulting Eng & Scientists
Project/Site: Aikman

Job ID: 890-3560-1
SDG: AR207018

Client Sample ID: FS .91

Date Collected: 11/23/22 09:20
Date Received: 11/23/22 11:28

Lab Sample ID: 890-3560-1

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.02 g	5 mL	40625	11/29/22 16:02	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	40842	12/02/22 19:24	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			41055	12/05/22 14:17	AJ	EET MID
Total/NA	Analysis	8015 NM		1			40777	12/01/22 12:06	SM	EET MID
Total/NA	Prep	8015NM Prep			10.00 g	10 mL	40653	11/30/22 08:30	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	40686	11/30/22 22:12	SM	EET MID
Soluble	Leach	DI Leach			5.03 g	50 mL	40392	11/28/22 09:15	CH	EET MID
Soluble	Analysis	300.0		5	50 mL	50 mL	40643	11/30/22 14:09	SMC	EET MID

Laboratory References:

EET MID = Eurofins Midland, 1211 W. Florida Ave, Midland, TX 79701, TEL (432)704-5440

Accreditation/Certification Summary

Client: Terracon Consulting Eng & Scientists
Project/Site: Aikman

Job ID: 890-3560-1
SDG: AR207018

Laboratory: Eurofins Midland

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
Texas	NELAP	T104704400-22-24	06-30-23

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
8015 NM		Solid	Total TPH
Total BTEX		Solid	Total BTEX

Method Summary

Client: Terracon Consulting Eng & Scientists
Project/Site: Aikman

Job ID: 890-3560-1
SDG: AR207018

Method	Method Description	Protocol	Laboratory
8021B	Volatile Organic Compounds (GC)	SW846	EET MID
Total BTEX	Total BTEX Calculation	TAL SOP	EET MID
8015 NM	Diesel Range Organics (DRO) (GC)	SW846	EET MID
8015B NM	Diesel Range Organics (DRO) (GC)	SW846	EET MID
300.0	Anions, Ion Chromatography	MCAWW	EET MID
5035	Closed System Purge and Trap	SW846	EET MID
8015NM Prep	Microextraction	SW846	EET MID
DI Leach	Deionized Water Leaching Procedure	ASTM	EET MID

Protocol References:

ASTM = ASTM International

MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions.

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

TAL SOP = TestAmerica Laboratories, Standard Operating Procedure

Laboratory References:

EET MID = Eurofins Midland, 1211 W. Florida Ave, Midland, TX 79701, TEL (432)704-5440

Sample Summary

Client: Terracon Consulting Eng & Scientists
Project/Site: Aikman

Job ID: 890-3560-1
SDG: AR207018

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-3560-1	FS .91	Solid	11/23/22 09:20	11/23/22 11:28	5

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Chain of Custody

Houston, TX (281) 240-4200, Dallas, TX (214) 902-0300
Midland, TX (432) 704-5440, San Antonio, TX (210) 509-3334
EL Paso, TX (915) 585-3443, Lubbock, TX (806) 794-1296
Hobbs, NM (575) 392-7550, Carlsbad, NM (575) 988-3199

Work Order No: _____

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Project Manager:	Joseph Guerrero	Bill to: (if different)	
Company Name:	Terracon	Company Name:	
Address:	4518 W Pierce St.	Address:	
City, State ZIP:	Carlsbad, NM 88220	City, State ZIP:	
Phone:	(575)689-4020	Email:	becky.sue.miller@terracon.com

Work Order Comments

Program: UST/PST ☐ PRP ☐ Brownfields ☐ RRC ☐ Superfund ☐
State of Project:
Reporting: Level II ☐ Level III ☐ PST/UST ☐ TRRP ☐ Level IV ☐
Deliverables: EDD ☐ ADaPT ☐ Other:

Project Name:	Aikman	Turn Around	☒ Routine ☐ Rush
Project Number:	AR207018	Due Date:	
Project Location:	Eddy	TAT starts the day received by the lab, if received by 4:30pm	
Sampler's Name:	Travis Casey		
PO #:			

SAMPLE RECEIPT				
Temp Blank:	Yes No	Wet Ice:	Yes No	
Samples Received Intact:	Yes No	Thermometer ID:	IR#007	
Cooler Custody Seals:	Yes No N/A	Correction Factor:	-0.2	
Sample Custody Seals:	Yes No N/A	Temperature Reading:	12.2	
Total Containers:		Corrected Temperature:	12.0	

ANALYSIS REQUEST

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Grab/ Comp	# of Cont	Pres. Code	Parameters: Chloride (EPA method 300)	BTEX (8021B)	TPH (8015)
FS 9.1	S	11/23	9:20	5'	G	1		X	X	X

890-3560 Chain of Custody

Preservative Codes

None: NO DI Water: H_2O
Cool: Cool MeOH: Me
HCL: HC HNO_3: HN
H_2S0_4: H_2 NaOH: Na
H_3PO_4: HP
$NaHSO_4$: NABIS
$Na_2S_2O_3$: $NaSO_3$
Zn Acetate+NaOH: Zn
NaOH+Ascorbic Acid: SAPC

Sample Comments

Total 200.7 / 6010 200.8 / 6020: 8RCRA 13PPM Texas 11 Al Sb As Ba Be B Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se Ag SiO_2 Na Sr Tl Sn U V Zn
Circle Method(s) and Metal(s) to be analyzed TCLP / SPLP 6010 : 8RCRA Sb As Ba Be Cd Cr Co Cu Pb Mn Mo Ni Se Ag Tl U Hg: 1631 / 245.1 / 7470 / 7471

Notice: Signature of this document and relinquishment of samples constitutes a valid purchase order from client company to Eurofins Xenco, its affiliates and subcontractors. It assigns standard terms and conditions of service. Eurofins 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 Eurofins Xenco. A minimum charge of $85.00 will be applied to each project and a charge of $5 for each sample submitted to Eurofins 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
1 Becky Miller	Cloe Cruz	11.23.22 1128	2		
3			4		
5			6		

Revised Date: 08/25/2020 Rev. 2020.2

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12/5/2022

Received by OCD: 4/10/2023 1:07:45 PM

Released to Imaging: 8/29/2023 1:29:02 PM

Released to Imaging: 8/29/2023 1:29:02 PM
Received by OCD: 4/10/2023 1:07:45 PM

eurofins | Environment Testing Xenco

Chain of Custody

Houston, TX (281) 240-4200, Dallas, TX (214) 902-0300
Midland, TX (432) 704-5440, San Antonio, TX (210) 509-3334
EL Paso, TX (915) 585-3443, Lubbock, TX (806) 794-1296
Hobbs, NM (575) 392-7550, Carlsbad, NM (575) 988-3199

Work Order No: _____

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Project Manager:	Joseph Guerrero	Bill to: (if different)	
Company Name:	Tetra Tech	Company Name:	
Address:	4518 W Pierce St.	Address:	
City, State ZIP:	Carlsbad, NM 88220	City, State ZIP:	
Phone:	(575) 689-4020	Email:	bucky sue.miller@tetratech.com

Work Order Comments

Program: UST/PST ☐ PRP ☐ Brownfields ☐ RRC ☐ Superfund ☐
State of Project:
Reporting: Level II ☐ Level III ☐ PST/UST ☐ TRRP ☐ Level IV ☐
Deliverables: EDD ☐ ADaPT ☐ Other:

~~Project Name:~~	Ketman	Turn Around	
Project Number:	AR207018	☒ Routine ☐ Rush	
Project Location:	Eddy	Due Date:	
Sampler's Name:	Travis Casey	TAT starts the day received by the lab, if received by 4:30pm	
PO #:			

SAMPLE RECEIPT	Temp Blank:	Yes No	Wet Ice:	Yes No
Samples Received Intact:	Yes No	Thermometer ID:	IR007	
Cooler Custody Seals:	Yes No N/A	Correction Factor:	-0.2	
Sample Custody Seals:	Yes No N/A	Temperature Reading:	12.2	
Total Containers:		Corrected Temperature:	12.0	

ANALYSIS REQUEST

Preservative Codes

None: NO DI Water: H_2O
Cool: Cool MeOH: Me
HCL: HC HNO_3: HN
H_2SO_4: H_2 NaOH: Na
H_3PO_4: HP
$NaHSO_4$: NABIS
$Na_2S_2O_3$: $NaSO_3$
Zn Acetate+NaOH: Zn
NaOH+Ascorbic Acid: SAPC

890-3560 Chain of Custody

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Grab/ Comp	# of Cont	Pres. Code	Parameters: Chloride (EPA method 300)	BTEX (8021B)	TPH (8015)	Sample Comments
FS 9.1	S	11/23	9:20	5'	G	1		X	X	X	

Total 200.7 / 6010 200.8 / 6020: 8RCRA 13PPM Texas 11 Al Sb As Ba Be B Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se Ag SiO_2 Na Sr Tl Sn U V Zn
Circle Method(s) and Metal(s) to be analyzed TCLP / SPLP 6010 : 8RCRA Sb As Ba Be Cd Cr Co Cu Pb Mn Mo Ni Se Ag Tl U Hg: 1631 / 245.1 / 7470 / 7471

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	Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1	Bucky Miller	Joe Cruz	11.23.22 1128			
3				4		
5				6		

Revised Date: 08/25/2020 Rev. 2020.2

Login Sample Receipt Checklist

Client: Terracon Consulting Eng & Scientists

Job Number: 890-3560-1
SDG Number: AR207018

Login Number: 3560
List Number: 1
Creator: Clifton, Cloe

List Source: Eurofins Carlsbad

Question	Answer	Comment
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	N/A	Refer to Job Narrative for details.
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	

Login Sample Receipt Checklist

Client: Terracon Consulting Eng & Scientists

Job Number: 890-3560-1
SDG Number: AR207018

Login Number: 3560
List Number: 2
Creator: Rodriguez, Leticia

List Source: Eurofins Midland
List Creation: 11/29/22 10:55 AM

Question	Answer	Comment
The cooler's custody seal, if present, is intact.	N/A	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	

APPENDIX E – WASTE MANIFEST

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

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

Standard of Care

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

Additional Scope Limitations

The 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 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's sole risk. Notwithstanding the foregoing, reliance by authorized parties will be subject to the terms, conditions, and limitations stated in the proposal and Solaris Water Midstream and Terracon's Master Services Agreement. The limitation of liability defined in the terms and conditions is the aggregate limit of Terracon's liability to Solaris Water Midstream and all relying parties unless otherwise agreed in writing.

District I
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811 S. First St., Artesia, NM 88210
Phone:(575) 748-1283 Fax:(575) 748-9720
District III
1000 Rio Brazos Rd., Aztec, NM 87410
Phone:(505) 334-6178 Fax:(505) 334-6170
District IV
1220 S. St Francis Dr., Santa Fe, NM 87505
Phone:(505) 476-3470 Fax:(505) 476-3462

State of New Mexico
Energy, Minerals and Natural Resources
Oil Conservation Division
1220 S. St Francis Dr.
Santa Fe, NM 87505

CONDITIONS

Action 205721

CONDITIONS

Operator: Spur Energy Partners LLC 9655 Katy Freeway Houston, TX 77024	OGRID: 328947
	Action Number: 205721
	Action Type: [C-141] Release Corrective Action (C-141)

CONDITIONS

Created By	Condition	Condition Date
rhamlet	We have received your closure report and final C-141 for Incident #NAPP2114556912 AIKMAN SWD, thank you. This closure is approved.	8/29/2023