Incident Number: nAPP2311343030

Release Assessment and Closure

Corral Fly SWD

Section 06, Township 25 South, Range 30 East

API: 30-015-44626

County: Eddy

Vertex File Number: 23E-02502

Prepared for:
Solaris Water Midstream Company

Prepared by:
Vertex Resource Services Inc.

Date:
March 2024

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Release Assessment and Closure
Corral Fly SWD
Section 06, Township 25 South, Range 30 East
API: 30-015-44626
County: Eddy

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New Mexico Oil Conservation Division – District 2
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Date

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1.0 Introduction

Solaris Midstream Water Company (Solaris) retained Vertex Resource Services Inc. (Vertex) to conduct a Release Assessment and Closure for a produced water release discovered on April 21, 2023, at Corral Fly SWD API 30-015-44626 (hereafter referred to as the "site"). Solaris submitted an initial C-141 Release Notification (Appendix A) to New Mexico Oil Conservation Division (NMOCD) District 2 on April 25, 2023. Incident ID number nAPP2311343030 was assigned to this incident.

This report provides a description of the release assessment and remediation activities associated with the site. The information presented demonstrates that closure criteria established in Table I of 19.15.29.12 of the *New Mexico Administrative Code* (NMAC; New Mexico Oil Conservation Division, 2018) related to NMOCD has been met and all applicable regulations are being followed. This document is intended to serve as a final report to obtain approval from NMOCD for the closure of this release, with the understanding that final remediation and restoration of the release site will be deferred until such time as all oil and gas activities are terminated and the site is reclaimed as per NMAC 19.15.29.13.

2.0 Incident Description

The release was discovered on April 21, 2023, due to a failure of a section of inlet pipe. The incident was reported on April 25, 2023, and involved the release of approximately 300 barrels (bbl.) of produced water on the pad site. Approximately 80 bbl. of free fluid was recovered during initial clean-up. Additional details relevant to the release are presented in the C-141 Report.

3.0 Site Characteristics

The site is located approximately 7.37 miles southeast of Malaga, New Mexico (Google Inc., 2023). The legal location for the site is Section 06, Township 25 South and Range 30 East in Eddy County, New Mexico. The release area is located on State property. An aerial photograph and site schematic are presented on Figure 1.

The location is typical of saltwater disposal facilities and is currently being used for produced water disposal and storage. The following sections specifically describe the release area on the constructed pad (Figure 1).

The Geological Map of New Mexico (New Mexico Bureau of Geology and Mineral Resources, 2023) indicates the site's surface geology primarily comprises Qep – Eolian and piedmont deposits: interlayered eolian sands and piedmont-slope deposits. The predominant soil type on the site is the Kermit-Berino fine sands with 0 to 3 percent slopes (United States Department of Agriculture, Natural Resources Conservation Service, 2023). Additional soil characteristics include an excessively drained drainage class with a negligible runoff class. The karst geology potential for the site is low (United States Department of the Interior, Bureau of Land Management, 2018).

The surrounding landscape is associated with dunes, Parna dunes, and terraces with elevations ranging between 2,842 and 4,500 feet. The climate is semiarid with average annual precipitation ranging between 8 and 13 inches. Using information from the United States Department of Agriculture, the dominant vegetation was determined to be a grassland/shrub mix, dominated by grasses, but with shrubs common throughout the site. Dropseed grasses, bluestem

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and threeawn grasses with sand sagebrush and honey mesquite dominate the historic plant community (United States Department of Agriculture, Natural Resources Conservation Service, 2023). Limited to no vegetation is allowed to grow on the compacted production pad, right-of-way and access road.

4.0 Closure Criteria Determination

The nearest active well to the site is a New Mexico Office of the State Engineer (NMOSE) exploratory well located approximately 0.59 miles southwest of the site (New Mexico Office of the State Engineer, 2023a, 2023b and 2023c). Data from 2023 depicts the NMOSE borehole was determined to be a dry hole at 55 feet below ground surface (bgs). Another monitoring well from the United States Geological Survey (USGS) is located approximately 0.36 miles southeast of the site. Data from 2023 indicate the last recorded groundwater level for this well was 264 feet bgs (United States Geological Survey, 2023). Information pertaining to the depth to groundwater (DTGW) determination is included in Appendix B.

There is no surface water present at the site. The nearest significant watercourse, as defined in Subsection P of 19.15.17.7 NMAC, is Wood Draw (National Wetlands Inventory) located approximately 0.37 miles north of the site (United States Fish and Wildlife Service, 2023).

At the site, there are no continuously flowing watercourses or significant watercourses, lakebeds, sinkholes, playa lakes, or other critical water or community features as outlined in Paragraph (4) of Subsection C of 19.15.29.12 NMAC.

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Closure Criteria Worksheet			
Site Name: Corral Fly SWD			
Spill Coordinates: 32.15396, -103.92917		**X: 600979**	**Y: 3558003**
Table 1. Closure Criteria Determination			
Site Specific Conditions		**Value**	**Unit**
1	Depth to Groundwater	**>55**	feet
2	Within 300 feet of any continuously flowing watercourse or any other significant watercourse	1,954	feet
3	Within 200 feet of any lakebed, sinkhole or playa lake (measured from the ordinary high-water mark)	28,934	feet
4	Within 300 feet from an occupied residence, school, hospital, institution or church	20,275	feet
5	i) Within 500 feet of a spring or a private, domestic fresh water well used by less than five households for domestic or stock watering purposes, **or**	3,091	feet
	ii) Within 1000 feet of any fresh water well or spring		feet
6	Within incorporated municipal boundaries or within a defined municipal fresh water field covered under a municipal ordinance adopted pursuant to Section 3-27-3 NMSA 1978 as amended, unless the municipality specifically approves	No	(Y/N)
7	Within 300 feet of a wetland	2,904	feet
8	Within the area overlying a subsurface mine	No	(Y/N)
9	Within an unstable area (Karst Map)	Low	Critical High Medium Low
10	Within a 100-year Floodplain	500	year
11	Soil Type	Kermit-Berino fine sands, 0 to 3 percent slopes	
12	Ecological Classification	Deep Sand (R070BD005NM)	
13	Geology	Qep: Eolian and Piedmont deposits	
	NMAC 19.15.29.12 E (Table 1) Closure Criteria	51-100'	<50' 51-100' >100'

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The closure criteria determined for the site are associated with the following constituent concentration limits as presented in Table 2.

Table 2. Closure Criteria for Soils Impacted by a Release

Minimum depth below any point within the horizontal boundary of the release to groundwater less than 10,000 mg/l TDS	Constituent	Limit
51 feet - 100 feet	Chloride	10,000 mg/kg
	TPH (GRO+DRO+MRO)	2,500 mg/kg
	GRO+DRO	1,000 mg/kg
	BTEX	50 mg/kg
	Benzene	10 mg/kg

TDS – total dissolved solids
TPH – total petroleum hydrocarbons, GRO – gas range organics, DRO – diesel range organics, MRO – motor oil range organics
BTEX – benzene, toluene, ethylbenzene and xylenes

5.0 Remedial Actions Taken

An initial site inspection of the release area was completed on May 22, 2023, which identified the area of the release specified in the initial C-141 Report. The approximate release area and other affected areas are presented on Figure 1. Site characterization activities at the site were conducted by Vertex between May 25 and July 3, 2023. 14 sample points (boreholes) were established to obtain full delineation. A total of 34 samples were collected and submitted to Eurofins Xenco for chemical analysis. Initial characterization sample locations are presented in Figure 1 and laboratory results are presented in Table 3. The Daily Field Report (DFR) associated with the initial site inspection is included in Appendix C

Remediation efforts began on July 6, 2023, and were finalized on August 7, 2023. Vertex personnel supervised the excavation of impacted soils. Field screening was completed on a total of 75 sample points and consisted of analysis using a Photo Ionization Detector (volatile hydrocarbons), Dexsil Petroflag using EPA SW-846 Method 9074 (extractable hydrocarbons), and Silver Nitrate titrations (chlorides). Field screening results were used to identify areas requiring further remediation. Soils were removed to depths ranging between 0.5 feet and 1 foot bgs. Impacted soil was transported by a licensed waste hauler and disposed of at an approved waste management facility. The final DFR with photographs of the remediated site prior to backfill is included in Appendix C.

Remedial activities and confirmation sampling were still taking place when the remediation was due to NMOCD. On July 20, 2023, Solaris submitted an extension request for remediation to NMOCD and is included in Appendix D.

Notifications that confirmatory samples were being collected were provided to the NMOCD before every sampling event and are included in Appendix D. Confirmatory composite samples were collected from the base and walls of the excavation in 200-square-foot increments. A total of 64 base samples and six wall samples were collected for laboratory

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analysis following NMOCD soil sampling procedures (Figure 2). Samples were submitted to Eurofins Environmental Testing under chain-of-custody protocols and analyzed for BTEX (EPA Method 8021B), total petroleum hydrocarbons (GRO, DRO, MRO – EPA Method 8015D), and total chlorides (EPA Method 300.0). Laboratory results are presented in Table 4, and the laboratory data reports are included in Appendix E. All confirmatory samples collected and analyzed were below the closure criteria for the site.

6.0 Closure Request and Denial

Vertex recommends no additional remedial action at the site until it is reclaimed to the appropriate standards of 19.15.29.13 NMAC. Laboratory analyses of confirmation samples collected at the site show final confirmatory values below NMOCD closure criteria for areas where DTGW is between 51 to 100 feet, as presented in Table 2. There are no anticipated risks to human, ecological, or hydrological receptors at this site. The excavation was backfilled with non-waste-containing, uncontaminated, earthen material, sourced locally, and placed to meet the site's existing grade to prevent water ponding and erosion. The reclamation requirements of 19.15.29.13 NMAC will be completed when the site is decommissioned, and all water-transferring activities are terminated.

Vertex would like to request a variance for the closure criteria of the site. The most recent DTGW data for the site are NMOSE's point of diversion well (C 04608), which is located 0.59 miles from the site, outside of NMOCD's required 0.5 miles. It was recorded as a dry hole at 55 feet bgs in 2022. There is also a USGS monitoring well (320857103553301) that can be used as another reference for this location. In 1998, just outside of NMOCD's 25-year requirement, the DTGW level was recorded at 264 feet bgs. The proposed variance seeks to assume NMOCD's 51 to 100-foot on-pad closure criteria per 19.15.29.12 NMAC due to the average DTGW data from the mentioned groundwater references. Vertex and Solaris do not believe that there are any risks to groundwater associated with the site.

The closure request for remediation was denied by NMOCD on February 9, 2024, due to horizontal delineation of the excavation not being properly met at sample points WS23-01, WS23-03, and WS23-04. In response, Vertex collected samples on February 21, 2024, and March 6, 2024, to complete the horizontal delineation to meet NMOCD's most stringent closure criteria for these sample points at BH24-15 through BH24-18. Lab analyses of the further horizontal delineation are found in Table 3. Sample locations for the most recently established sample points are found in Figure 1.

Vertex respectfully re-requests that this incident (nAPP2311343030) be closed as all closure requirements set forth in Subsection E of 19.15.29.12 NMAC have been met. Solaris certifies that all information in this report and the appendices are correct and that they have complied with all applicable closure requirements and conditions specified in Division rules and directives to meet NMOCD requirements to obtain closure on the site.

Should you have any questions or concerns, please do not hesitate to contact Chance Dixon at 575.988.1472 or cdixon@vertex.ca.

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8.0 Limitations

This report has been prepared for the sole benefit of Solaris Midstream Water Company. This document may not be used by any other person or entity, with the exception of the New Mexico Oil Conservation Division, without the express written consent of Vertex Resource Services Inc. (Vertex) and Solaris Midstream Water Company. Any use of this report by a third party, or any reliance on decisions made based on it, or damages suffered as a result of the use of this report are the sole responsibility of the user.

The information and conclusions contained in this report are based upon work undertaken by trained professional and technical staff in accordance with generally accepted scientific practices current at the time the work was performed. The conclusions and recommendations presented represent the best judgement of Vertex based on the data collected during the assessment. Due to the nature of the assessment and the data available, Vertex cannot warrant against undiscovered environmental liabilities. Conclusions and recommendations presented in this report should not be considered legal advice.

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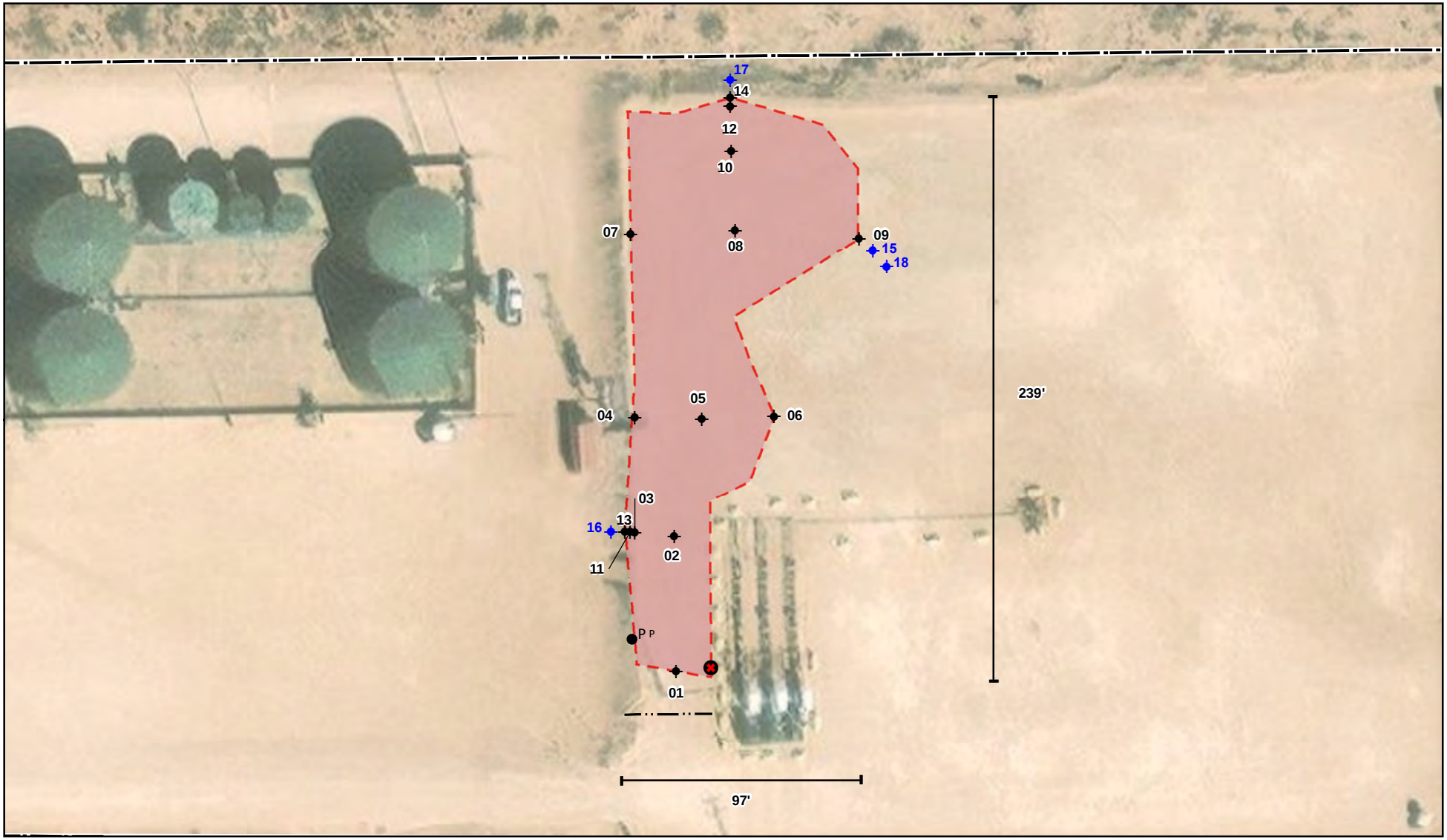
FIGURES



Borehole (Prefixed by "BH23-")
Borehole (Prefixed by "BH24-")
Point of Release
P P Power Pole
Pipeline (Underground)
Approximate Lease Boundary
Approximate Release Area (~12,943 sq.ft.)

VERTEX

0 25 50 Feet

Map Center:
Lat/Long: 32.154231, -103.929157

NAD 1983 UTM Zone 13N
Date: Jun 19/23

N

Characterization Schematic
Corral Fly SWD

FIGURE:
1

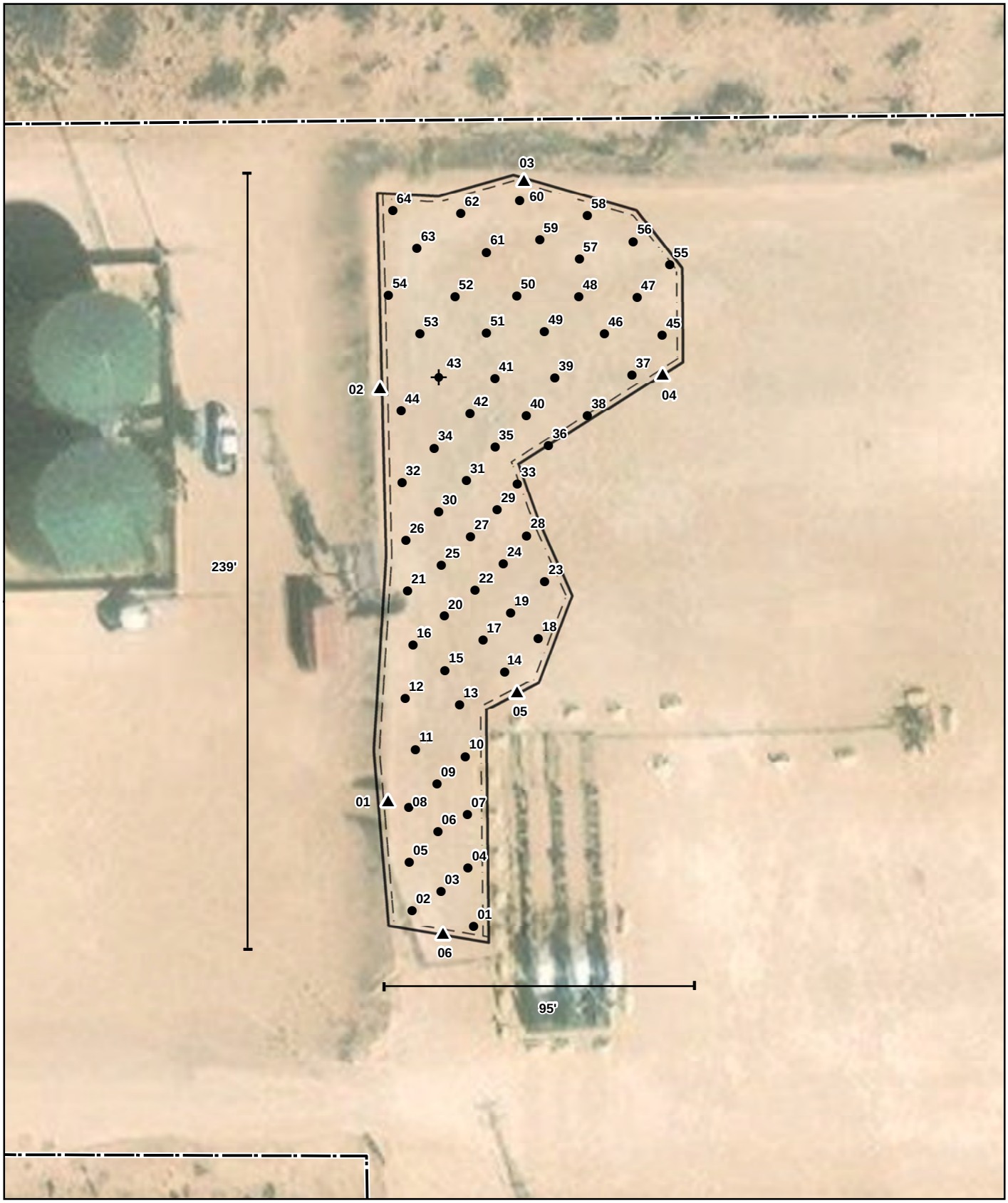
SOLARIS WATER MIDSTREAM

Geospatial data presented in this figure may be derived from external sources and Vertex does not assume any liability for inaccuracies. This figure is intended for reference use only and is not certified for legal, survey, or engineering purposes.

Note: Georeferenced image from Esri, 2022. Site features from GPS. Approximate release area from imagery. Vertex Professional Services Ltd., 2023.

VERSATILITY. EXPERTISE.

Document Path: G:\1-Projects_US PROJECTS\Solaris Water Midstream\23E-02502- Corral Fly SWD\Figure 1 Characterization Schematic (23E-01630).mxd



● Base Sample (Prefixed by "BS23-") ▲ Wall Sample (Prefixed by "WS23-") Excavation to 6' bgs (~12,943 sq.ft.)

Borehole (Prefixed by "BH23-") Approximate Lease Boundary

VERTEX

0 15 30 ft

NAD 1983 UTM Zone 13N

Date: Aug 15/23

Map Center:
Lat: 32.154231,
Long:-103.929157

N

Confirmation Schematic
Corral Fly SWD

FIGURE: **2**

SOLARIS WATER MIDSTREAM

Geospatial data presented in this figure may be derived from external sources and Vertex does not assume any liability for inaccuracies. This figure is intended for reference use only and is not certified for legal, survey, or engineering purposes.

Note: Georeferenced image from Esri, 2022. Approximate lease boundary from imagery by Vertex Professional Services Ltd. (Vertex), 2023. Site features from GPS by Vertex, 2023.

VERSATILITY. EXPERTISE.

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TABLES

Table 3. Initial Characterization Laboratory Results - Depth to Groundwater 51-100 feet bgs
Solaris Water Midstream, LLC
Corral Fly SWD
NM OCD Tracking #: nAPP2311343030
Project #: 23E-02502
Lab Report: 890-4746-1, 890-4751-1, 890-4754-1, 890-4786-1,

Sample Description			Petroleum Hydrocarbons										Inorganic
Sample ID	Depth (ft)	Date	Benzene	Toluene	Ethylbenzene	Total Xylenes	BTEX (Total)	Gasoline Range Organics (GRO)	Diesel Range Organics (DRO)	Motor Oil Range Organics (MRO)	(GRO + DRO)	Total Petroleum Hydrocarbons (TPH)	Chloride Concentration
			(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)
Criteria	NMOCD - NMAC <50 ft 19.15.29 (2018)		10	-	-	-	50	-	-	-	-	100	600
	NMOCD - NMAC 51-100 ft 19.15.29 (2018)		10	-	-	-	50	-	-	-	1,000	2,500	10,000
	NMOCD - NMAC >100 ft 19.15.29 (2018)		10	-	-	-	50	-	-	-	1,000	2,500	20,000
Excavation													
BH23-01	0	5/25/2023	ND	ND	ND	ND	ND	ND	65.5	ND	65.5	65.5	564
BH23-01	2	5/25/2023	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	380
BH23-01	4	5/25/2023	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	160
BH23-02	0	5/25/2023	ND	ND	ND	ND	ND	ND	93.4	ND	93.4	93.4	970
BH23-02	2	5/25/2023	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	2960
BH23-02	4	5/25/2023	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1430
BH23-02	6	7/3/2023	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	38.6
BH23-03	0	5/25/2023	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	804
BH23-03	2	5/25/2023	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	4170
BH23-03	4	5/25/2023	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1720
BH23-03	6	7/3/2023	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	43.7
BH23-04	0	5/26/2023	ND	ND	ND	ND	ND	ND	72.6	ND	72.6	72.6	219
BH23-04	2	5/26/2023	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	179
BH23-05	0	5/26/2023	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	749
BH23-05	2	5/26/2023	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1060
BH23-05	4	5/26/2023	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	359
BH23-06	0	5/26/2023	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	183
BH23-06	2	5/26/2023	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	176
BH23-07	0	5/30/2023	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	123
BH23-07	2	5/30/2023	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	141
BH23-08	0	5/30/2023	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	2070
BH23-08	2	6/6/2023	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	268
BH23-08	4	6/6/2023	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	284
BH23-09	0	5/30/2023	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	163
BH23-09	2	5/30/2023	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	165
BH23-10	0	5/30/2023	ND	ND	ND	ND	ND	ND	178	ND	178	178	2860
BH23-11	0	6/6/2023	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	2430
BH23-11	2	6/6/2023	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1780
BH23-12	0	6/6/2023	ND	ND	ND	ND	ND	ND	607	ND	607	607	9230
BH23-12	2	6/6/2023	ND	ND	ND	ND	ND	ND	729	ND	729	729	9770
BH23-13	0	6/12/2023	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	123
BH23-13	2	6/12/2023	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	43.2
BH23-14	0	6/12/2023	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	71.6
BH23-14	2	6/12/2023	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	50.6
BH24-15	0.5	2/21/2024	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1750
BH24-15	2	2/21/2024	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	623
BH24-16	0	2/21/2024	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	151
BH24-16	2	2/21/2024	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	84
BH24-17	0	2/21/2024	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	68
BH24-17	2	2/21/2024	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	200
BH24-18	0	3/6/2024	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	77
BH24-18	2	3/6/2024	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	59

NMAC - New Mexico Administrative Code (Title 19, Chapter 15, Part 29; 2018)
ND - Not Detected at the Reporting Limit
- Denotes no standard/not analyzed

VERTEX

Table 4. Confirmatory Laboratory Results - Depth to Groundwater 51-100 feet bgs
Solaris Midstream Water Company
Corral Fly SWD
NMOCD Tracking #: nAPP2311343030
Project #: 23E-02502
Lab Report: 890-4917, 890-4786, 890-4814, 890-4902, 890-4746, 890-4751, 890-4754, 890-5046

Sample Description			Petroleum Hydrocarbons										Inorganic
Sample ID	Depth (ft)	Date	Benzene	Toluene	Ethylbenzene	Total Xylenes	BTEX (Total)	Gasoline Range Organics (GRO)	Diesel Range Organics (DRO)	Motor Oil Range Organics (MRO)	(GRO + DRO)	Total Petroleum Hydrocarbons (TPH)	Chloride Concentration
			(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)
Criteria	NMOCD - NMAC <50 ft 19.15.29 (2018)		10	-	-	-	50	-	-	-	-	100	600
	NMOCD - NMAC 51-100 ft 19.15.29 (2018)		10	-	-	-	50	-	-	-	1000	2500	10000
	NMOCD - NMAC >100 ft 19.15.29 (2018)		10	-	-	-	50	-	-	-	1000	2500	20000
2023 Boreholes													
BS23-01	0.5	July 7, 2023	ND	ND	ND	ND	ND	ND	145	ND	145	145	7870
BS23-02	0.5	July 7, 2023	ND	ND	ND	ND	ND	ND	71	ND	71	71	1450
BS23-03	0.5	July 7, 2023	NB	ND	ND	ND	ND	ND	120	ND	120	120	2180
BS23-04	0.5	July 7, 2023	ND	ND	ND	ND	ND	ND	87	ND	87	87	8020
BS23-05	0.5	July 7, 2023	ND	ND	ND	ND	ND	ND	66	ND	66	66	2210
BS23-06	0.5	July 7, 2023	ND	ND	ND	ND	ND	ND	170	ND	170	170	8940
BS23-07	0.5	July 7, 2023	ND	ND	ND	ND	ND	ND	77	ND	77	77	2160
BS23-08	0.5	July 7, 2023	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	8280
BS23-09	0.5	July 7, 2023	ND	ND	ND	ND	ND	ND	166	ND	166	166	9680
BS23-10	0.5	July 7, 2023	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	8100
BS23-11	0	June 6, 2023	ND	ND	ND	ND	ND	ND	ND	ND	ND	-	2430
BS23-11	0.5	July 7, 2023	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	9660
BS23-11	2	June 6, 2023	ND	ND	ND	ND	ND	ND	ND	ND	ND	-	1780
BS23-12	0.5	July 7, 2023	ND	ND	ND	ND	ND	ND	181	ND	181	181	8590
BS23-13	0.5	July 7, 2023	ND	ND	ND	ND	ND	ND	65	ND	65	65	9500
BS23-14	0.5	July 7, 2023	ND	ND	ND	ND	ND	ND	62	ND	62	62	1040
BS23-15	0.5	July 7, 2023	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**10200**
BS23-15	1	August 7, 2023	ND	ND	ND	ND	ND	ND	52	ND	52	52	1380
BS23-16	0.5	July 7, 2023	ND	ND	ND	ND	ND	ND	59	ND	59	59	1730
BS23-17	0.5	July 7, 2023	ND	ND	ND	ND	ND	ND	166	ND	166	166	4250
BS23-18	0.5	July 7, 2023	ND	ND	ND	ND	ND	ND	78	ND	78	78	2160
BS23-19	0.5	July 7, 2023	ND	ND	ND	ND	ND	ND	58	ND	58	58	**10300**
BS23-19	1	August 7, 2023	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	352
BS23-20	0.5	July 7, 2023	ND	ND	ND	ND	ND	ND	94	ND	94	94	7320
BS23-21	0.5	July 11, 2023	ND	ND	ND	ND	ND	ND	92	ND	92	92	456
BS23-22	0.5	July 11, 2023	ND	ND	ND	ND	ND	ND	147	ND	147	147	165
BS23-23	0.5	July 11, 2023	ND	ND	ND	ND	ND	ND	82	ND	82	82	810
BS23-24	0.5	July 11, 2023	ND	ND	ND	ND	ND	ND	62	ND	62	62	203
BS23-25	0.5	July 11, 2023	ND	ND	ND	ND	ND	ND	60	ND	60	60	771
BS23-26	0.5	July 11, 2023	ND	ND	ND	ND	ND	ND	57	ND	57	57	291
BS23-27	0.5	July 11, 2023	ND	ND	ND	ND	ND	ND	56	ND	56	56	76
BS23-28	0.5	July 11, 2023	ND	ND	ND	ND	ND	ND	95	ND	95	95	207
BS23-29	0.5	July 11, 2023	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	414
BS23-30	0.5	July 12, 2023	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	2940
BS23-31	0.5	July 12, 2023	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	223
BS23-32	0.5	July 12, 2023	ND	ND	ND	ND	ND	ND	**1220**	ND	**1220**	**1220**	3320
BS23-32	1	August 7, 2023	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	3250
BS23-33	0.5	July 12, 2023	ND	ND	ND	ND	ND	ND	120	ND	120	120	767
BS23-34	0.5	July 12, 2023	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**10800**
BS23-34	1	August 7, 2023	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	3660
BS23-35	0.5	July 12, 2023	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	9780
BS23-36	0.5	July 12, 2023	ND	ND	ND	ND	ND	ND	96	ND	96	96	2360
BS23-37	0.5	July 12, 2023	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	355
BS23-38	0.5	July 12, 2023	ND	ND	ND	ND	ND	ND	796	ND	796	796	**12300**
BS23-38	1	August 7, 2023	ND	ND	ND	ND	ND	ND	272	ND	272	272	4640
BS23-39	0.5	July 12, 2023	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1080
BS23-40	0.5	July 12, 2023	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	2740

VERTEX

Sample Description			Petroleum Hydrocarbons										Inorganic
Sample ID	Depth (ft)	Date	Benzene	Toluene	Ethylbenzene	Total Xylenes	BTEX (Total)	Gasoline Range Organics (GRO)	Diesel Range Organics (DRO)	Motor Oil Range Organics (MRO)	(GRO + DRO)	Total Petroleum Hydrocarbons (TPH)	Chloride Concentration
			(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)
Criteria	NMOCD - NMAC <50 ft 19.15.29 (2018)		10	-	-	-	50	-	-	-	-	100	600
	NMOCD - NMAC 51-100 ft 19.15.29 (2018)		10	-	-	-	50	-	-	-	1000	2500	10000
	NMOCD - NMAC >100 ft 19.15.29 (2018)		10	-	-	-	50	-	-	-	1000	2500	20000
2023 Boreholes													
BS23-41	0.5	July 13, 2023	ND	ND	ND	ND	ND	ND	52	ND	52	52	1470
BS23-42	0.5	July 13, 2023	ND	ND	ND	ND	ND	ND	111	ND	111	111	6100
BS23-43	0.5	July 13, 2023	ND	ND	ND	ND	ND	ND	57	ND	57	57	2800
BS23-44	0.5	July 13, 2023	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	2990
BS23-45	0.5	July 13, 2023	ND	ND	ND	ND	ND	ND	107	ND	107	107	2220
BS23-46	0.5	July 13, 2023	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1500
BS23-47	0.5	July 13, 2023	ND	ND	ND	ND	ND	ND	77	ND	77	77	2750
BS23-48	0.5	July 13, 2023	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	2470
BS23-49	0.5	July 13, 2023	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	626
BS23-50	0.5	July 13, 2023	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	499
BS23-51	0.5	July 13, 2023	ND	ND	ND	ND	ND	ND	52	ND	52	52	141
BS23-52	0.5	July 13, 2023	ND	ND	ND	ND	ND	ND	66	ND	66	66	348
BS23-53	0.5	July 13, 2023	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	261
BS23-54	0.5	July 13, 2023	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	78
BS23-55	0.5	July 13, 2023	ND	ND	ND	ND	ND	ND	60	ND	60	60	4480
BS23-56	0.5	July 14, 2023	ND	ND	ND	ND	ND	ND	87	ND	87	87	986
BS23-57	0.5	July 14, 2023	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	544
BS23-58	0.5	July 14, 2023	ND	ND	ND	ND	ND	ND	61	ND	61	61	2900
BS23-59	0.5	July 14, 2023	ND	ND	ND	ND	ND	ND	73	ND	73	73	3040
BS23-60	0.5	July 14, 2023	ND	ND	ND	ND	ND	ND	182	ND	182	182	583
BS23-61	0.5	July 14, 2023	ND	ND	ND	ND	ND	ND	341	ND	341	341	1540
BS23-62	0.5	July 14, 2023	ND	ND	ND	ND	ND	ND	111	ND	111	111	1480
BS23-63	0.5	July 14, 2023	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	355
BS23-64	0.5	July 14, 2023	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	188
WS23-01	0.5	July 14, 2023	ND	ND	ND	ND	ND	ND	118	ND	118	118	5240
WS23-02	0.5	July 14, 2023	ND	ND	ND	ND	ND	ND	71	ND	71	71	170
WS23-03	0.5	July 14, 2023	ND	ND	ND	ND	ND	ND	255	ND	255	255	1520
WS23-04	0.5	July 14, 2023	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	4240
WS23-05	0.5	July 14, 2023	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	140
WS23-06	0.5	July 14, 2023	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	351

NMAC - New Mexico Administrative Code (Title 19, Chapter 15, Part 29; 2022)

ND - Not Detected at the Reporting Limit

- Denotes no standard/not analyzed

Bold and grey shaded indicates exceedance outside of NMOCD Closure Criteria (on-pad)

APPENDIX A - NMOCD C-141 Report

District I
1625 N. French Dr., Hobbs, NM 88240
District II
811 S. First St., Artesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy Minerals and Natural Resources Department

Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-141
Revised August 24, 2018
Submit to appropriate OCD District office

Incident ID	nAPP2311343030
District RP	
Facility ID	
Application ID	

Release Notification

Responsible Party

Responsible Party Solaris Water, LLC	OGRID 371643
Contact Name Rob Kirk	Contact Telephone O 575- 300-5155 C 469-978-5620
Contact email rob.kirk@ariswater.com	Incident # *(assigned by OCD)*
Contact mailing address 3305 Boyd Drive, Carlsbad, NM 88220	

Location of Release Source

Latitude 32.15396 Longitude -103.92917
(NAD 83 in decimal degrees to 5 decimal places)

Site Name Corral Fly SWD	Site Type Salt Water Disposal
Date Release Discovered 04/21/2023	API# *(if applicable)* 30-015-44626

Unit Letter	Section	Township	Range	County
L7	06	25S	30E	Eddy

Surface Owner: ☑ State ☐ Federal ☐ Tribal ☐ Private (*Name:* _____)

Nature and Volume of Release

Material(s) Released (Select all that apply and attach calculations or specific justification for the volumes provided below)

☐ Crude Oil	Volume Released (bbls)	Volume Recovered (bbls)
☑ Produced Water	Volume Released (bbls) 300 BBLs	Volume Recovered (bbls) 80 BBLs
	Is the concentration of dissolved chloride in the produced water >10,000 mg/l?	☑ Yes ☐ No
☐ Condensate	Volume Released (bbls)	Volume Recovered (bbls)
☐ Natural Gas	Volume Released (Mcf)	Volume Recovered (Mcf)
☐ Other (describe)	Volume/Weight Released (provide units)	Volume/Weight Recovered (provide units)

Cause of Release A section of inlet pipe failed during operation resulting in the release of Produced Water. The SWD was shut down stopping the release and the failed pipe section was replaced.

State of New Mexico
Oil Conservation Division

Incident ID	nAPP2311343030
District RP	
Facility ID	
Application ID	

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?	>55 (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.

Form C-141
Page 4

State of New Mexico
Oil Conservation Division

Incident ID	nAPP2311343030
District RP	
Facility ID	
Application ID	

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

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

Signature: _____ Date: _____

email: rob.kirk@ariswater.com Telephone: 469-978-5620

OCD Only

Received by: _____ Date: _____

State of New Mexico
Oil Conservation Division

Incident ID	nAPP2311343030
District RP	
Facility ID	
Application ID	

Closure

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

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

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

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

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

☒ Description of remediation activities

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

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

Signature: _____ Date: _____

email: rob.kirk@ariswater.com Telephone: 469-978-5620

OCD Only

Received by: _____ Date: _____

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

Closure Approved by: _____ Date: _____

Printed Name: _____ Title: _____

APPENDIX B – Closure Criteria Research Documentation

New Mexico Office of the State Engineer
Water Column/Average Depth to Water

(A CLW##### in the POD suffix indicates the POD has been replaced & no longer serves a water right file.)

(R=POD has been replaced, O=orphaned, C=the file is closed)

(quarters are 1=NW 2=NE 3=SW 4=SE)
(quarters are smallest to largest) (NAD83 UTM in meters) (In feet)

POD Number	POD Sub-basin	County	Q 64	Q 16	Q 4	Sec	Tws	Rng	X	Y	Distance	Depth Well	Depth Water	Water Column
C 04608 POD1	CUB	ED	1	1	2	12	25S	29E	600080	3557719	942	55		
C 04604 POD1	CUB	ED	1	1	3	01	25S	29E	599401	3558388	1624	102		
C 04529 POD1	CUB	ED	1	3	1	18	25S	30E	601077	3555733	2271			
C 02459	C	ED	4	4	1	02	25S	29E	598422	3558663*	2640	150		
C 04525 POD1	CUB	ED	3	1	2	10	25S	29E	596976	3557505	4034			

Average Depth to Water: --

Minimum Depth: --

Maximum Depth: --

Record Count: 5

UTMNAD83 Radius Search (in meters):

Easting (X): 600979 **Northing (Y):** 3558003 **Radius:** 5000

***UTM location was derived from PLSS - see Help**

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

C-04608 POD1 0.59 Miles

6/27/2023, 7:26:49 AM

Override 1

GIS WATERS PODs

Active

Plugged

OSE District Boundary

New Mexico State Trust Lands

Both Estates

NHD Flowlines

Stream River

SiteBoundaries

1:9,028

0 0.07 0.15 0.3 mi

0 0.15 0.3 0.6 km

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

Web Generated Map
Map is generated by web users.

New Mexico Office of the State Engineer

Point of Diversion Summary

(quarters are 1=NW 2=NE 3=SW 4=SE)
(quarters are smallest to largest) (NAD83 UTM in meters)

Well Tag	POD Number	Q64	Q16	Q4	Sec	Tws	Rng	X	Y
NA	C 04608 POD1	1	1	2	12	25S	29E	600080	3557719

Driller License: 1249 **Driller Company:** ATKINS ENGINEERING ASSOC. INC.

Driller Name: ATKINS, JACKIE D.UELENER

Drill Start Date:	04/19/2022	**Drill Finish Date:**	04/19/2022	**Plug Date:**	04/26/2022
Log File Date:	05/09/2022	**PCW Rcv Date:**		**Source:**	
Pump Type:		**Pipe Discharge Size:**		**Estimated Yield:**	0 GPM
Casing Size:		**Depth Well:**	55 feet	**Depth Water:**	

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

Released to Imaging: 7/26/2024 3:59:45 PM

National Water Information System: Web Interface

USGS Water Resources

Data Category: Groundwater | Geographic Area: United States | GO

Click to hideNews Bulletins

- Explore the *NEW* USGS National Water Dashboard interactive map to access real-time water data from over 13,500 stations nationwide.
- Full News

Groundwater levels for the Nation

Important: Next Generation Monitoring Location Page

Search Results -- 1 sites found

site_no list =

- 320857103553301

Minimum number of levels = 1

Save file of selected sites to local disk for future upload

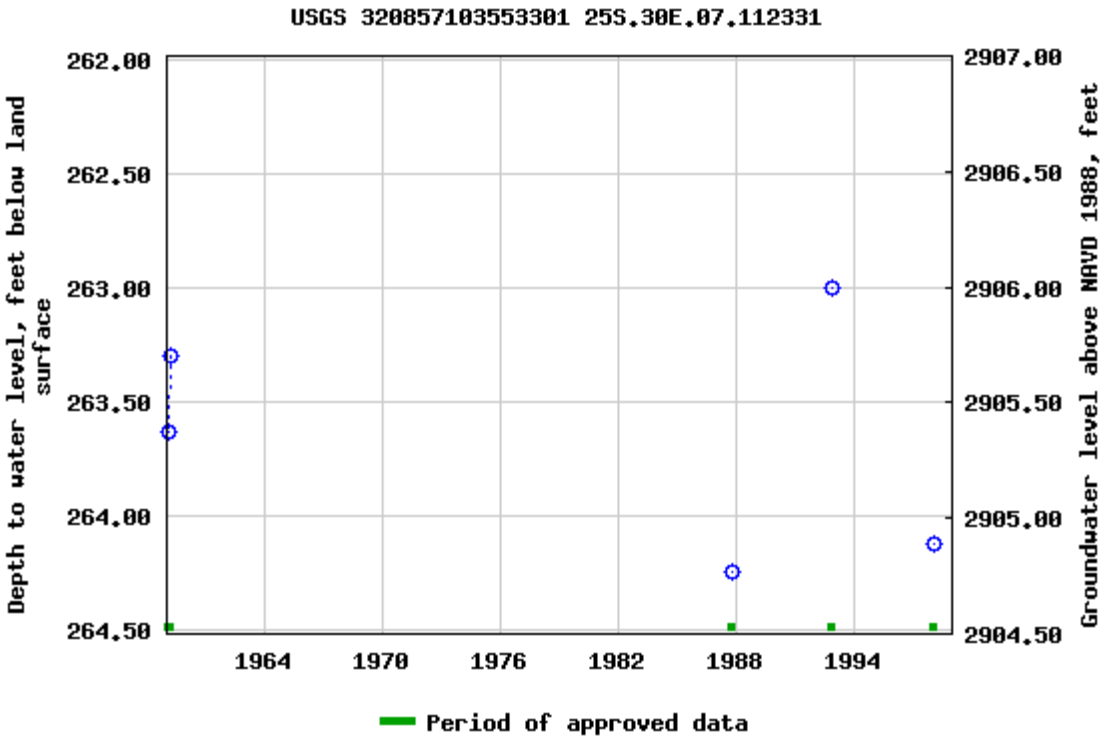
USGS 320857103553301 25S.30E.07.112331

Available data for this site | Groundwater: Field measurements | GO

Eddy County, New Mexico
Hydrologic Unit Code 13060011
Latitude 32°08'57", Longitude 103°55'33" NAD27
Land-surface elevation 3,169 feet above NAVD88
The depth of the well is 385 feet below land surface.
This well is completed in the Pecos River Basin alluvial aquifer (N100PCSRVR) national aquifer.
This well is completed in the Alluvium, Bolson Deposits and Other Surface Deposits (110AVMB) local aquifer.

Output formats

Table of data
Tab-separated data
Graph of data
Reselect period



Breaks in the plot represent a gap of at least one year between field measurements.
Download a presentation-quality graph

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Automated retrievals
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Data Tips
Explanation of terms
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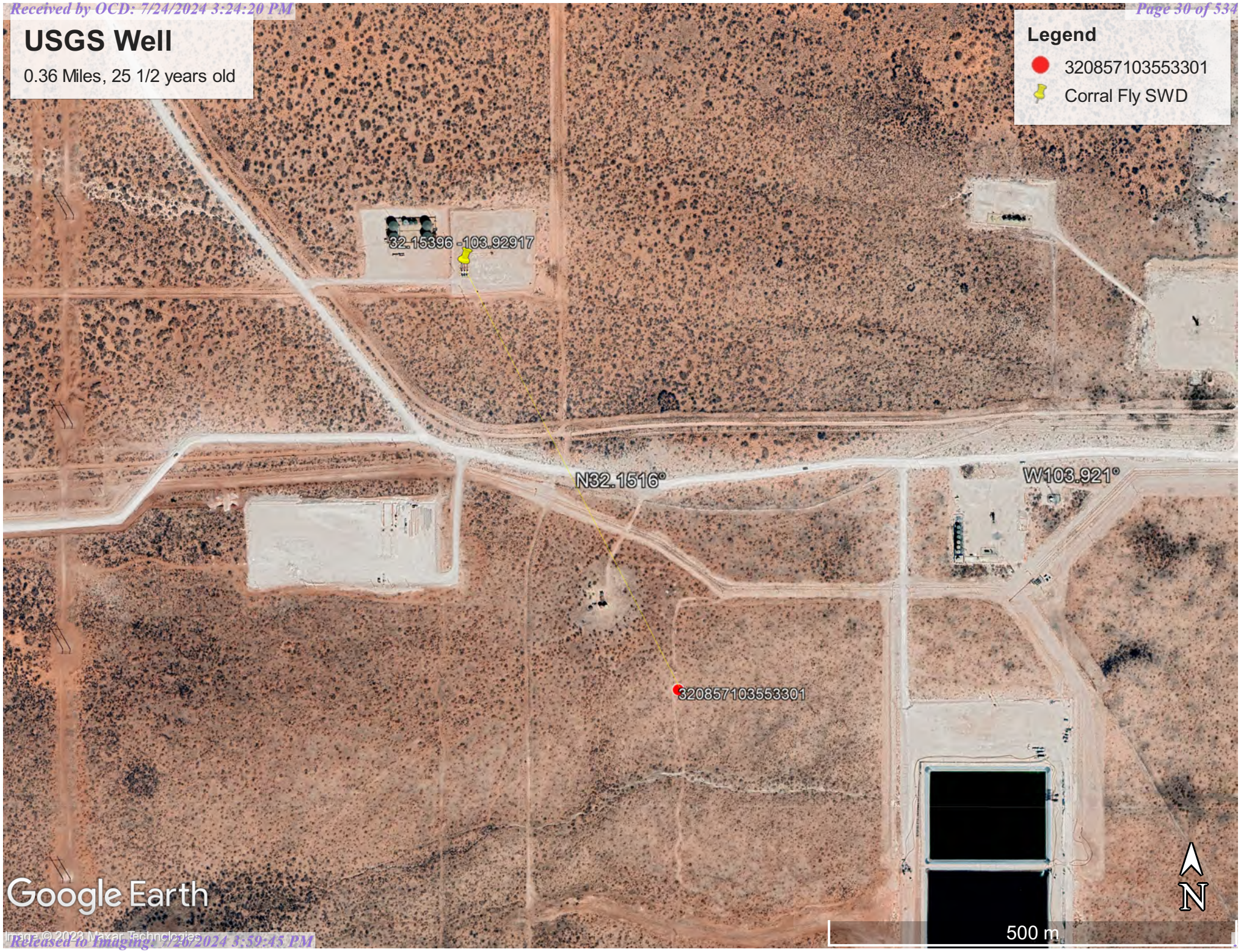
Accessibility FOIA Privacy Policies and Notices

U.S. Department of the Interior | U.S. Geological Survey

Title: Groundwater for USA: Water Levels
URL: https://nwis.waterdata.usgs.gov/nwis/gwlevels?

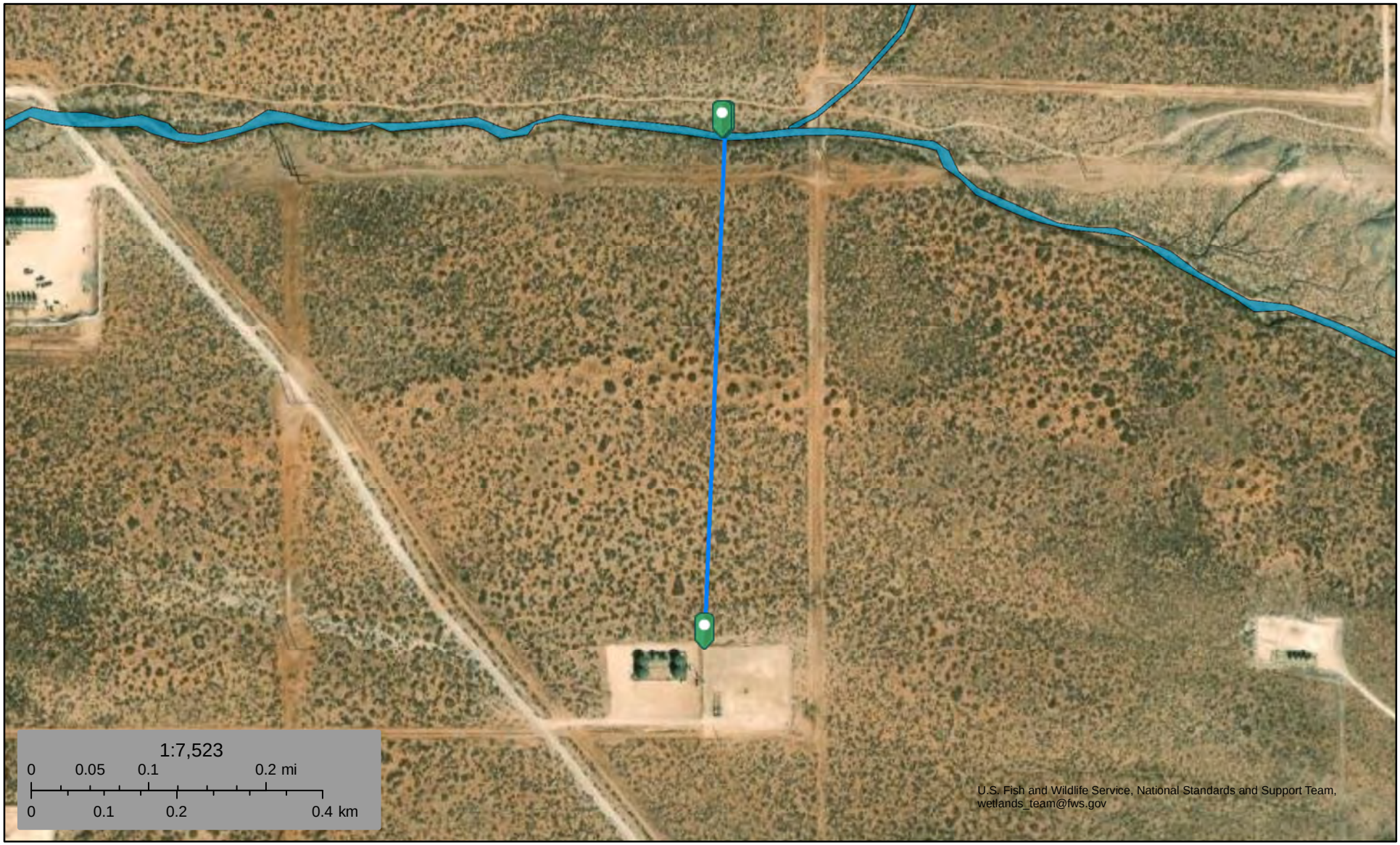
Page Contact Information: USGS Water Data Support Team
Page Last Modified: 2023-06-27 12:37:53 EDT
0.58 0.5 nadww02


USGS Well
0.36 Miles, 25 1/2 years old
Legend
320857103553301
Corral Fly SWD
32.15396 -103.92917
N32.1516°
W103.921°
320857103553301
Google Earth
Image © 2023 Maxar Technologies
500 m
N

Received by OCD: 7/24/2024 3:24:20 PM

U.S. Fish and Wildlife Service
National Wetlands Inventory

Corral Fly Watercourse 0.37mi



June 21, 2023

Wetlands_Alaska

- Estuarine and Marine Deepwater
- Estuarine and Marine Wetland
- Freshwater Emergent Wetland
- Freshwater Forested/Shrub Wetland
- Freshwater Pond
- Lake
- Other
- Riverine

This map is for general reference only. The US Fish and Wildlife Service is not responsible for the accuracy or currentness of the base data shown on this map. All wetlands related data should be used in accordance with the layer metadata found on the Wetlands Mapper web site.

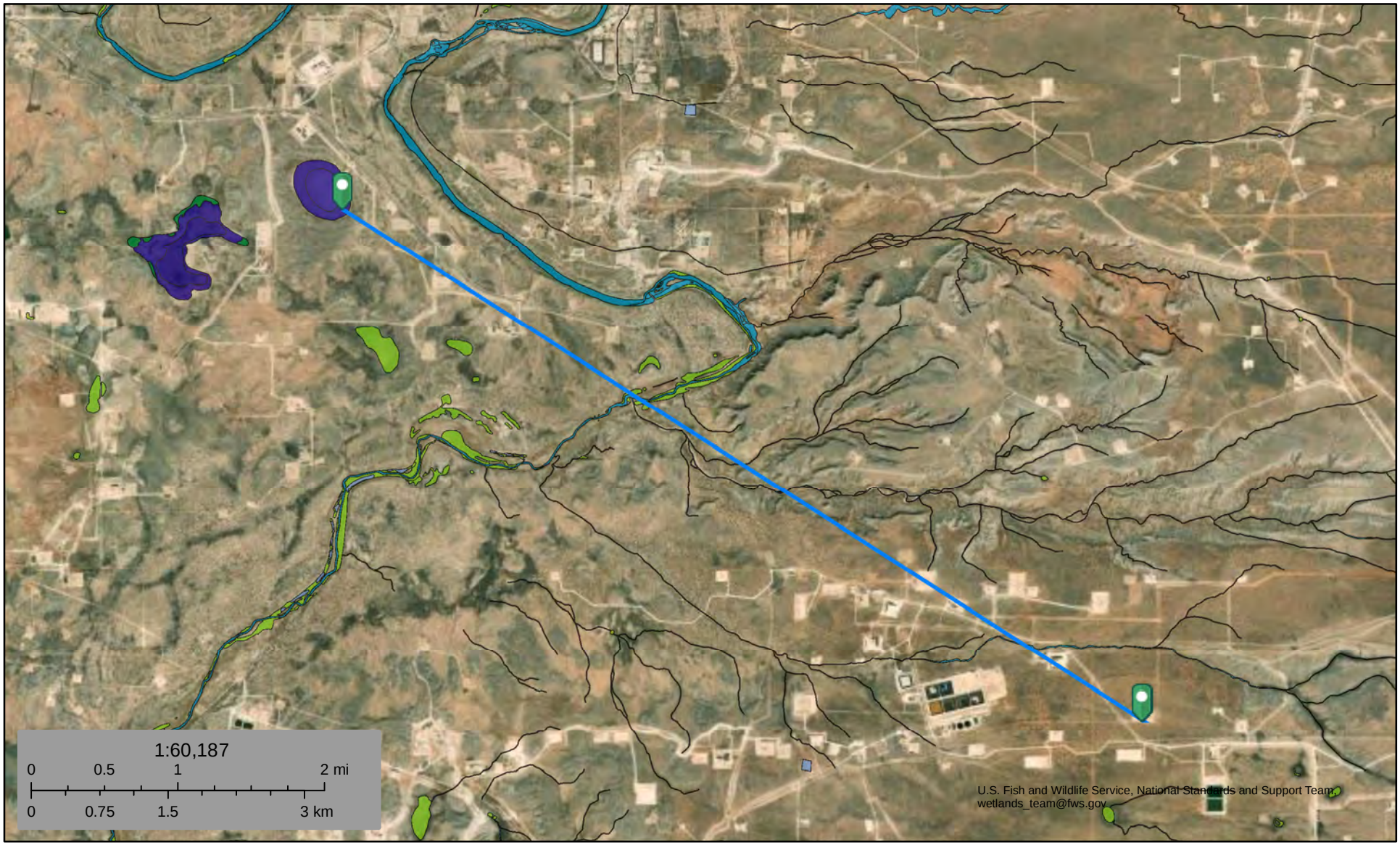
National Wetlands Inventory (NWI)
This page was produced by the NWI mapper

Released to Imaging: 7/26/2024 3:59:45 PM

Received by OCD: 7/24/2024 3:24:20 PM

U.S. Fish and Wildlife Service
National Wetlands Inventory

Corral Fly Lake 5.48 mi



June 21, 2023

Wetlands_Alaska

- Estuarine and Marine Deepwater
- Estuarine and Marine Wetland
- Freshwater Emergent Wetland
- Freshwater Forested/Shrub Wetland
- Freshwater Pond
- Lake
- Other
- Riverine

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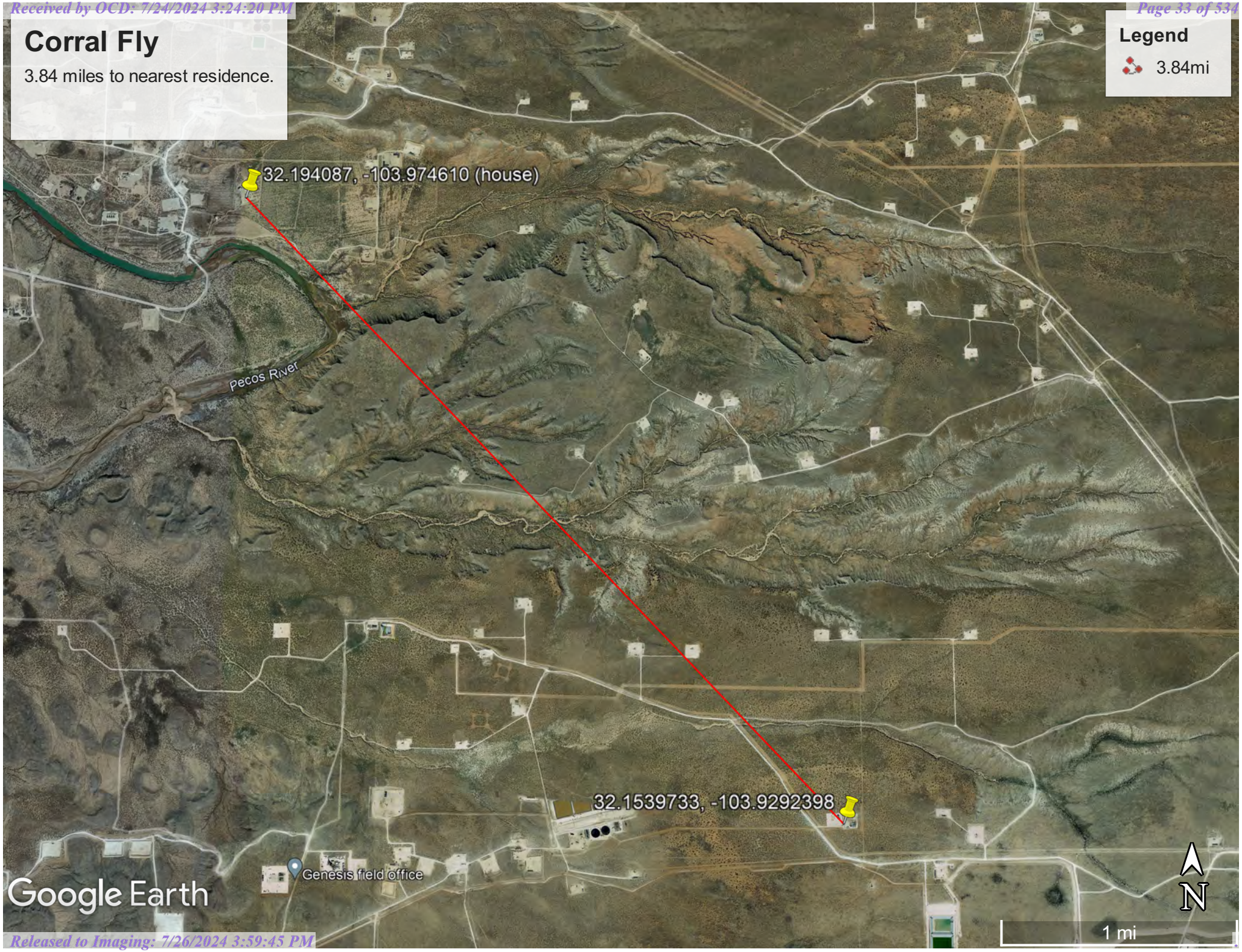
Corral Fly

3.84 miles to nearest residence.



New Mexico Office of the State Engineer

Active & Inactive Points of Diversion

(with Ownership Information)

(acre ft per annum)

(R=POD has been replaced and no longer serves this file, C=the file is closed)

(quarters are 1=NW 2=NE 3=SW 4=SE)

(quarters are smallest to largest)

(NAD83 UTM in meters)

WR File Nbr	Sub basin	Use	Diversion	Owner	County	POD Number	Well Tag	Code	Grant	Source	q q q 6416 4	Sec	Tws	Rng	X	Y	Distance
C 04608	CUB	EXP	0	LUCID ENERGY DELAWARE LLC	ED	C 04608 POD1	NA				1 1 2	12	25S	29E	600080	3557719	942

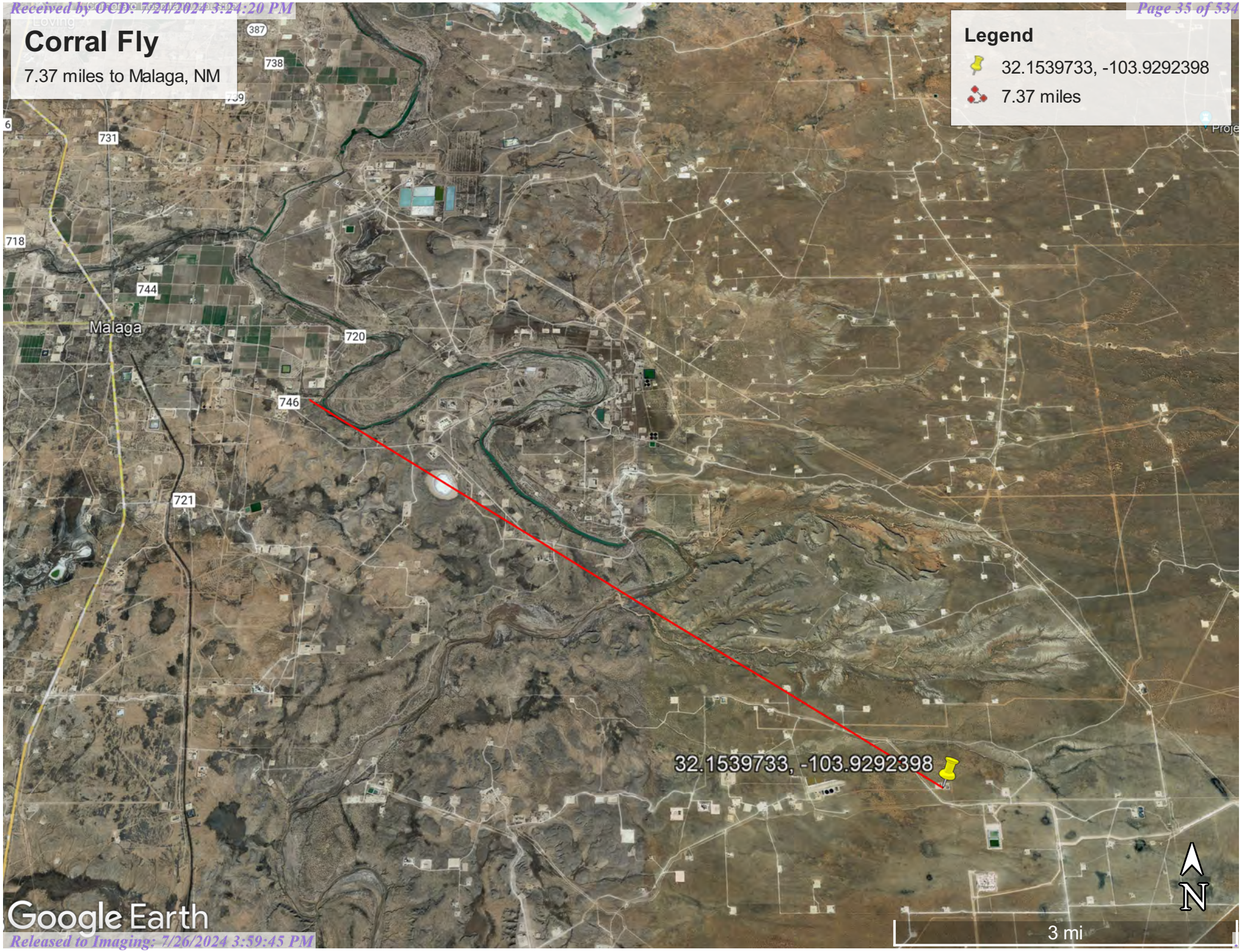
Record Count: 1

UTMNAD83 Radius Search (in meters):

Easting (X): 600979 **Northing (Y):** 3558003 **Radius:** 1610

Sorted by: Distance

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


Corral Fly
7.37 miles to Malaga, NM
Legend
32.1539733, -103.9292398
7.37 miles
Malaga
387
738
731
718
744
720
746
721
32.1539733, -103.9292398
Google Earth
3 mi
N

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U.S. Fish and Wildlife Service
National Wetlands Inventory

Corral Fly Wetland 0.55 Miles

June 21, 2023

Wetlands_Alaska

- Estuarine and Marine Deepwater
- Estuarine and Marine Wetland
- Freshwater Emergent Wetland
- Freshwater Forested/Shrub Wetland
- Freshwater Pond
- Lake
- Other
- Riverine

This map is for general reference only. The US Fish and Wildlife Service is not responsible for the accuracy or currentness of the base data shown on this map. All wetlands related data should be used in accordance with the layer metadata found on the Wetlands Mapper web site.

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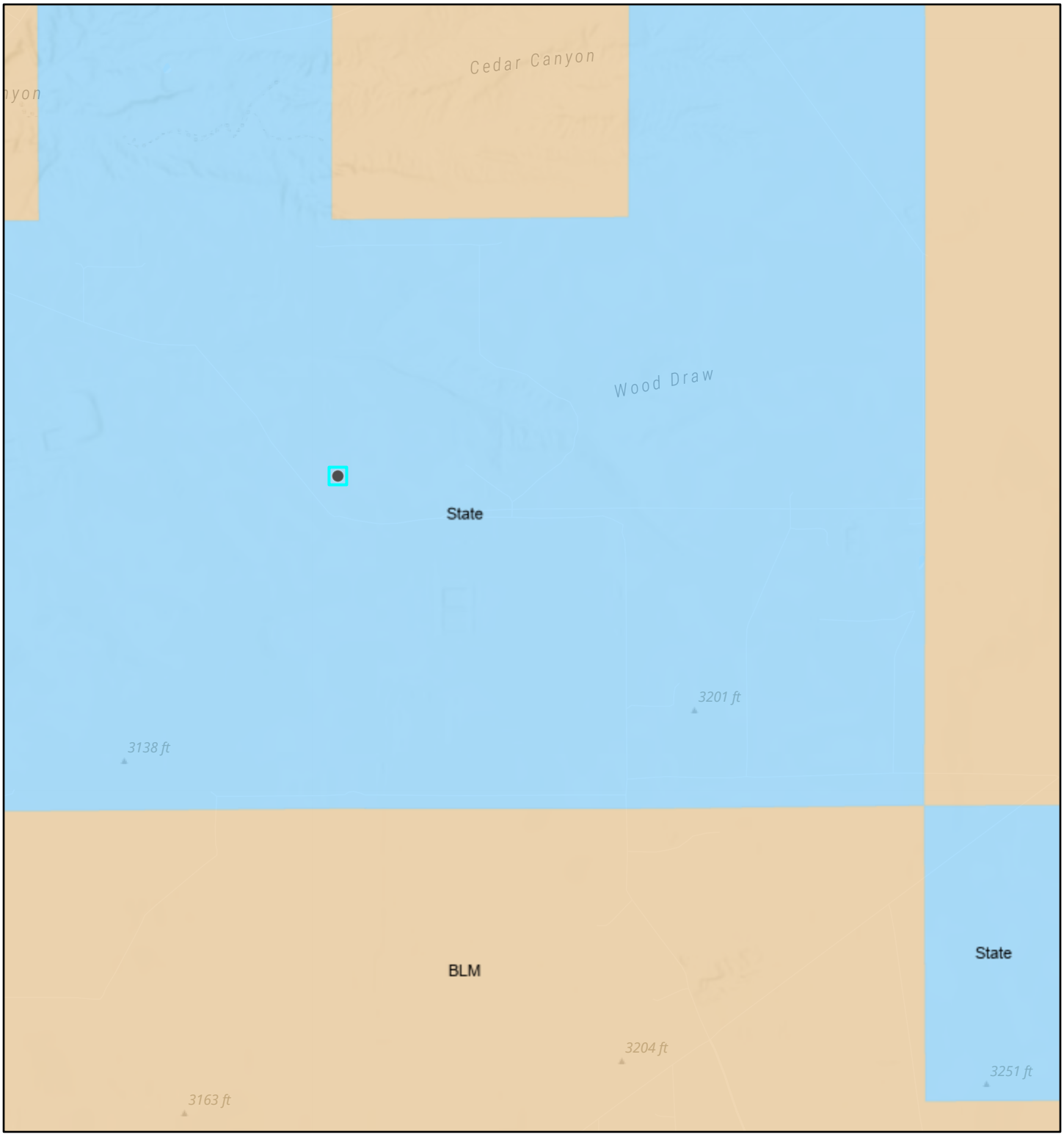
Corral Fly Mines



6/21/2023, 3:23:41 PM

1:36,112

0 0.25 0.5 1 mi

0 0.4 0.8 1.6 km

Mineral Ownership

A-All minerals are owned by U.S.

N-No minerals are owned by the U.S.

Land Ownership

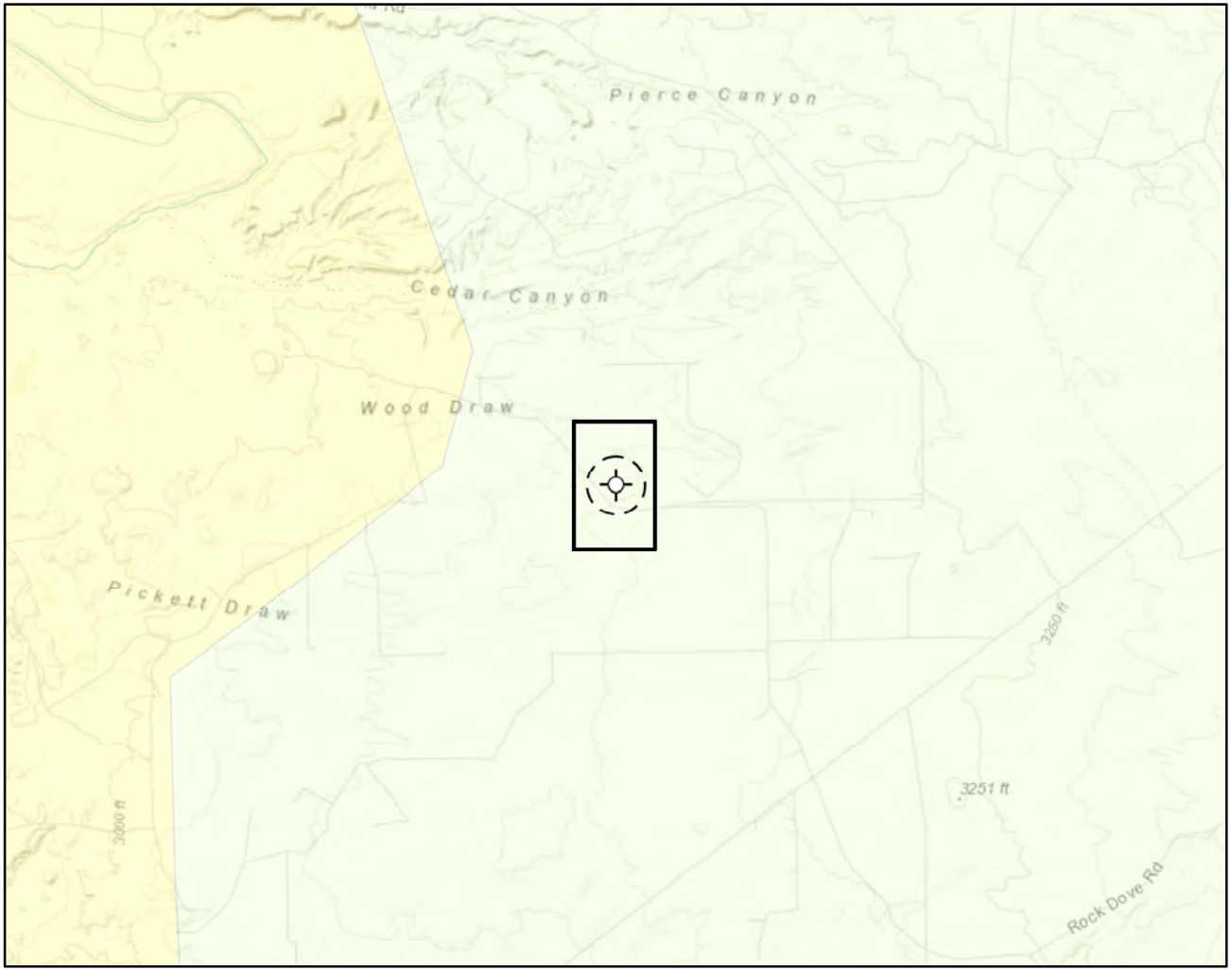
BLM

S

U.S. BLM, Esri, NASA, NGA, USGS, FEMA, NM Coal Mine Reclamation Program, NM EMNRD, Texas Parks & Wildlife, CONANP, Esri, HERE, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, US Census Bureau, USDA

EMNRD MMD GIS Coordinator

NM Energy, Minerals and Natural Resources Department (http://nm-emnrd.maps.arcgis.com/apps/webappbuilder/index.html?id=7ebfa3c432db42978d66c99a9cc8311a)



Karst Potential

- Critical
- High
- Medium
- Low

Site Location

Site Buffer (1,000 ft.)

Overview Map

0 0.25 0.5 1 mi

Detail Map

0 150 300 600 ft.

VERTEX

Map Center:
Lat/Long: 32.153960, -103.929170

NAD 1983 UTM Zone 13N
Date: Jun 22/23

N

Karst Potential Schematic
Corral Fly

FIGURE:
X

SOLARIS WATER MIDSTREAM

Geospatial data presented in this figure may be derived from external sources and Vertex does not assume any liability for inaccuracies. This figure is intended for reference use only and is not certified for legal, survey, or engineering purposes.

Note: Inset Map, Georeferenced from ESRI, 2022; Overview Map: ESRI World Topographic. Karst potential data sourced from Rosswell Field Office, Bureau of Land Management, 2020 or United States Department of the Interior, Bureau of Land Management. (2018). Karst Potential.

VERSATILITY. EXPERTISE.

Document Path: G:\1-Projects_US PROJECTS\Solaris Water Midstream\23E-02502- Corral Fly SWD\Figure X Karst Potential Map (23E-02502).mxd

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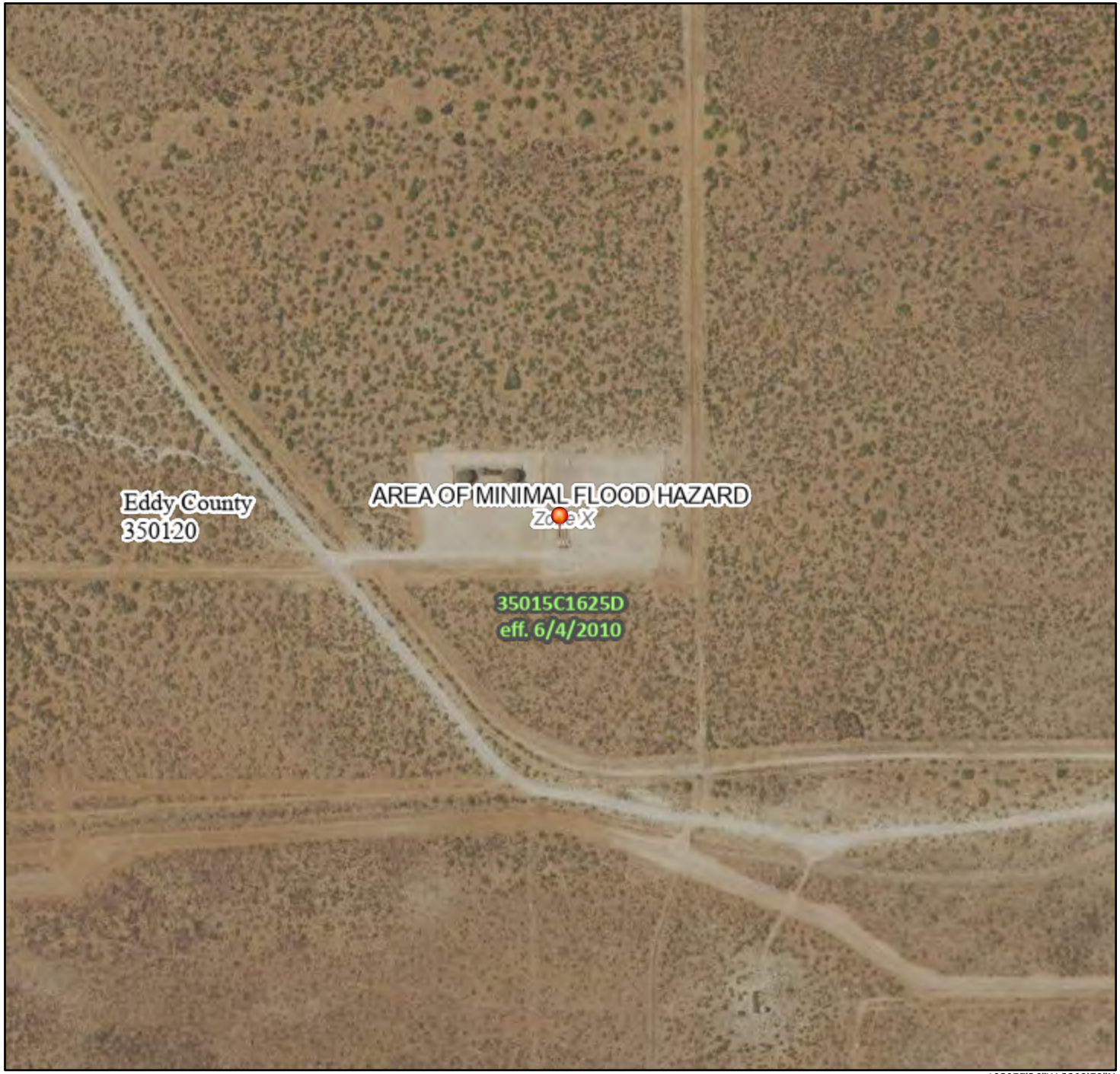
National Flood Hazard Layer FIRMette

FEMA

103°56'4"W 32°9'30"N



0 250 500 1,000 1,500 2,000 Feet

1:6,000

103°55'26"W 32°8'59"N

Basemap Imagery Source: USGS National Map 2023

Legend

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT

SPECIAL FLOOD HAZARD AREAS
- Without Base Flood Elevation (BFE) *Zone A, V, A99*
- With BFE or Depth *Zone AE, AO, AH, VE, AR*
- Regulatory Floodway

OTHER AREAS OF FLOOD HAZARD
- 0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile *Zone X*
- Future Conditions 1% Annual Chance Flood Hazard *Zone X*
- Area with Reduced Flood Risk due to Levee. See Notes. *Zone X*
- Area with Flood Risk due to Levee *Zone D*

OTHER AREAS
- NO SCREEN Area of Minimal Flood Hazard *Zone X*
- Effective LOMRs
- Area of Undetermined Flood Hazard *Zone D*

GENERAL STRUCTURES
- Channel, Culvert, or Storm Sewer
- Levee, Dike, or Floodwall

OTHER FEATURES
- 20.2 Cross Sections with 1% Annual Chance
- 17.5 Water Surface Elevation
- Coastal Transect
- Base Flood Elevation Line (BFE)
- Limit of Study
- Jurisdiction Boundary
- Coastal Transect Baseline
- Profile Baseline
- Hydrographic Feature

MAP PANELS
- Digital Data Available
- No Digital Data Available
- Unmapped

N

The pin displayed on the map is an approximate point selected by the user and does not represent an authoritative property location.

This map complies with FEMA's standards for the use of digital flood maps if it is not void as described below. The basemap shown complies with FEMA's basemap accuracy standards

The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on 6/21/2023 at 4:01 PM and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time.

This map image is void if the one or more of the following map elements do not appear: basemap imagery, flood zone labels, legend, scale bar, map creation date, community identifiers, FIRM panel number, and FIRM effective date. Map images for unmapped and unmodernized areas cannot be used for regulatory purposes.

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United States Department of Agriculture

NRCS

Natural Resources Conservation Service

A product of the National Cooperative Soil Survey, a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local participants

Custom Soil Resource Report for Eddy Area, New Mexico

June 21, 2023

Preface

Soil surveys contain information that affects land use planning in survey areas. They highlight soil limitations that affect various land uses and provide information about the properties of the soils in the survey areas. Soil surveys are designed for many different users, including farmers, ranchers, foresters, agronomists, urban planners, community officials, engineers, developers, builders, and home buyers. Also, conservationists, teachers, students, and specialists in recreation, waste disposal, and pollution control can use the surveys to help them understand, protect, or enhance the environment.

Various land use regulations of Federal, State, and local governments may impose special restrictions on land use or land treatment. Soil surveys identify soil properties that are used in making various land use or land treatment decisions. The information is intended to help the land users identify and reduce the effects of soil limitations on various land uses. The landowner or user is responsible for identifying and complying with existing laws and regulations.

Although soil survey information can be used for general farm, local, and wider area planning, onsite investigation is needed to supplement this information in some cases. Examples include soil quality assessments (http://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/health/) and certain conservation and engineering applications. For more detailed information, contact your local USDA Service Center (https://offices.sc.egov.usda.gov/locator/app?agency=nrcs) or your NRCS State Soil Scientist (http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/contactus/?cid=nrcs142p2_053951).

Great differences in soil properties can occur within short distances. Some soils are seasonally wet or subject to flooding. Some are too unstable to be used as a foundation for buildings or roads. Clayey or wet soils are poorly suited to use as septic tank absorption fields. A high water table makes a soil poorly suited to basements or underground installations.

The National Cooperative Soil Survey is a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local agencies. The Natural Resources Conservation Service (NRCS) has leadership for the Federal part of the National Cooperative Soil Survey.

Information about soils is updated periodically. Updated information is available through the NRCS Web Soil Survey, the site for official soil survey information.

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How Soil Surveys Are Made

Soil surveys are made to provide information about the soils and miscellaneous areas in a specific area. They include a description of the soils and miscellaneous areas and their location on the landscape and tables that show soil properties and limitations affecting various uses. Soil scientists observed the steepness, length, and shape of the slopes; the general pattern of drainage; the kinds of crops and native plants; and the kinds of bedrock. They observed and described many soil profiles. A soil profile is the sequence of natural layers, or horizons, in a soil. The profile extends from the surface down into the unconsolidated material in which the soil formed or from the surface down to bedrock. The unconsolidated material is devoid of roots and other living organisms and has not been changed by other biological activity.

Currently, soils are mapped according to the boundaries of major land resource areas (MLRAs). MLRAs are geographically associated land resource units that share common characteristics related to physiography, geology, climate, water resources, soils, biological resources, and land uses (USDA, 2006). Soil survey areas typically consist of parts of one or more MLRA.

The soils and miscellaneous areas in a survey area occur in an orderly pattern that is related to the geology, landforms, relief, climate, and natural vegetation of the area. Each kind of soil and miscellaneous area is associated with a particular kind of landform or with a segment of the landform. By observing the soils and miscellaneous areas in the survey area and relating their position to specific segments of the landform, a soil scientist develops a concept, or model, of how they were formed. Thus, during mapping, this model enables the soil scientist to predict with a considerable degree of accuracy the kind of soil or miscellaneous area at a specific location on the landscape.

Commonly, individual soils on the landscape merge into one another as their characteristics gradually change. To construct an accurate soil map, however, soil scientists must determine the boundaries between the soils. They can observe only a limited number of soil profiles. Nevertheless, these observations, supplemented by an understanding of the soil-vegetation-landscape relationship, are sufficient to verify predictions of the kinds of soil in an area and to determine the boundaries.

Soil scientists recorded the characteristics of the soil profiles that they studied. They noted soil color, texture, size and shape of soil aggregates, kind and amount of rock fragments, distribution of plant roots, reaction, and other features that enable them to identify soils. After describing the soils in the survey area and determining their properties, the soil scientists assigned the soils to taxonomic classes (units). Taxonomic classes are concepts. Each taxonomic class has a set of soil characteristics with precisely defined limits. The classes are used as a basis for comparison to classify soils systematically. Soil taxonomy, the system of taxonomic classification used in the United States, is based mainly on the kind and character of soil properties and the arrangement of horizons within the profile. After the soil

scientists classified and named the soils in the survey area, they compared the individual soils with similar soils in the same taxonomic class in other areas so that they could confirm data and assemble additional data based on experience and research.

The objective of soil mapping is not to delineate pure map unit components; the objective is to separate the landscape into landforms or landform segments that have similar use and management requirements. Each map unit is defined by a unique combination of soil components and/or miscellaneous areas in predictable proportions. Some components may be highly contrasting to the other components of the map unit. The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The delineation of such landforms and landform segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, onsite investigation is needed to define and locate the soils and miscellaneous areas.

Soil scientists make many field observations in the process of producing a soil map. The frequency of observation is dependent upon several factors, including scale of mapping, intensity of mapping, design of map units, complexity of the landscape, and experience of the soil scientist. Observations are made to test and refine the soil-landscape model and predictions and to verify the classification of the soils at specific locations. Once the soil-landscape model is refined, a significantly smaller number of measurements of individual soil properties are made and recorded. These measurements may include field measurements, such as those for color, depth to bedrock, and texture, and laboratory measurements, such as those for content of sand, silt, clay, salt, and other components. Properties of each soil typically vary from one point to another across the landscape.

Observations for map unit components are aggregated to develop ranges of characteristics for the components. The aggregated values are presented. Direct measurements do not exist for every property presented for every map unit component. Values for some properties are estimated from combinations of other properties.

While a soil survey is in progress, samples of some of the soils in the area generally are collected for laboratory analyses and for engineering tests. Soil scientists interpret the data from these analyses and tests as well as the field-observed characteristics and the soil properties to determine the expected behavior of the soils under different uses. Interpretations for all of the soils are field tested through observation of the soils in different uses and under different levels of management. Some interpretations are modified to fit local conditions, and some new interpretations are developed to meet local needs. Data are assembled from other sources, such as research information, production records, and field experience of specialists. For example, data on crop yields under defined levels of management are assembled from farm records and from field or plot experiments on the same kinds of soil.

Predictions about soil behavior are based not only on soil properties but also on such variables as climate and biological activity. Soil conditions are predictable over long periods of time, but they are not predictable from year to year. For example, soil scientists can predict with a fairly high degree of accuracy that a given soil will have a high water table within certain depths in most years, but they cannot predict that a high water table will always be at a specific level in the soil on a specific date.

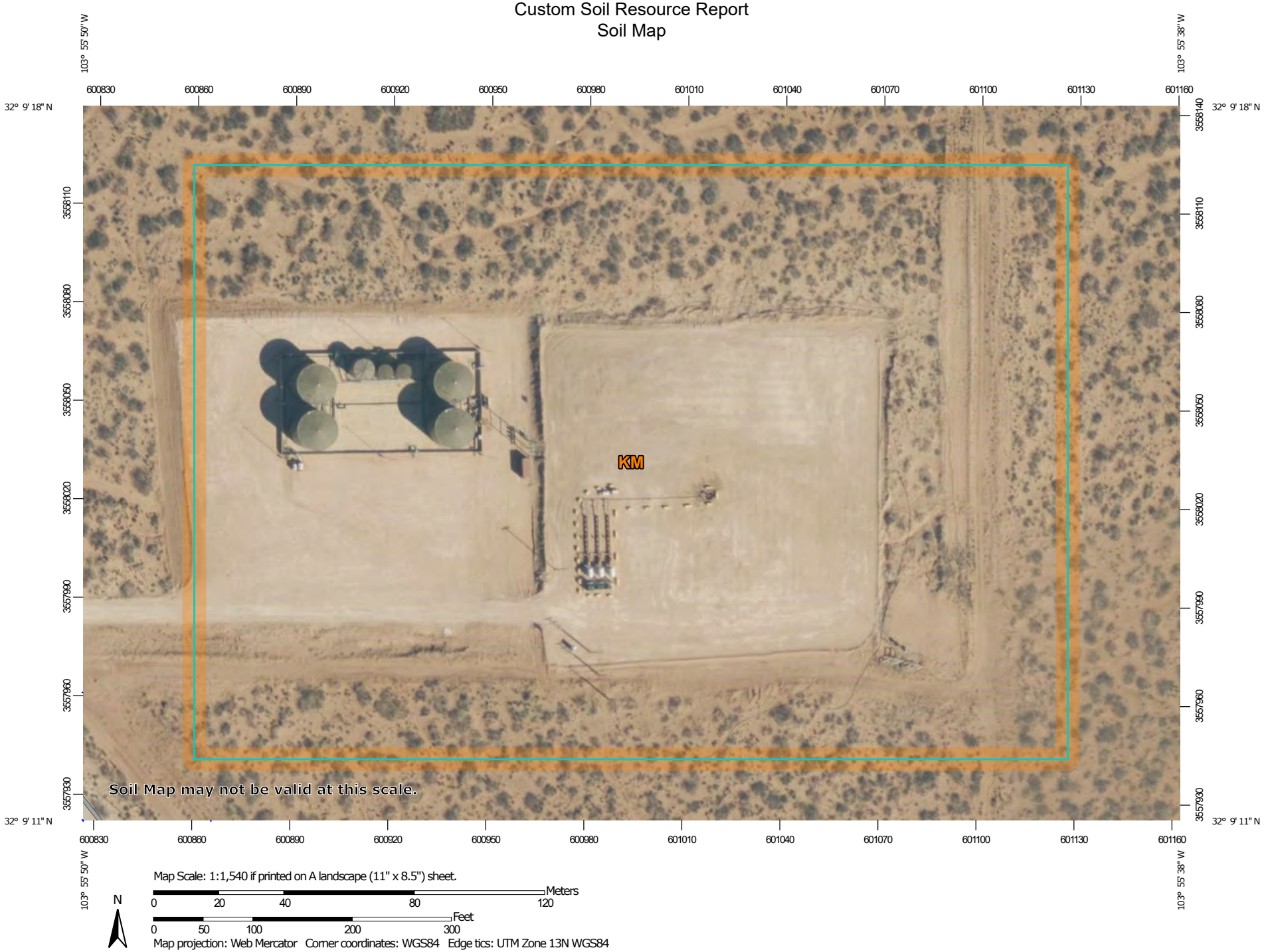
After soil scientists located and identified the significant natural bodies of soil in the survey area, they drew the boundaries of these bodies on aerial photographs and

identified each as a specific map unit. Aerial photographs show trees, buildings, fields, roads, and rivers, all of which help in locating boundaries accurately.

Soil Map

The soil map section includes the soil map for the defined area of interest, a list of soil map units on the map and extent of each map unit, and cartographic symbols displayed on the map. Also presented are various metadata about data used to produce the map, and a description of each soil map unit.

Custom Soil Resource Report
Soil Map



MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils
- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

Special Point Features
- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

Water Features
- Streams and Canals

Transportation
- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background
- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:20,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Eddy Area, New Mexico
Survey Area Data: Version 18, Sep 8, 2022

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Feb 7, 2020—May 12, 2020

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
KM	Kermit-Berino fine sands, 0 to 3 percent slopes	12.0	100.0%
Totals for Area of Interest		**12.0**	**100.0%**

Map Unit Descriptions

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or landform segments that have similar use and management requirements. The delineation of such segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, however, onsite investigation is needed to define and locate the soils and miscellaneous areas.

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives important soil properties and qualities.

Soils that have profiles that are almost alike make up a *soil series*. Except for differences in texture of the surface layer, all the soils of a series have major horizons that are similar in composition, thickness, and arrangement.

Soils of one series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Alpha silt loam, 0 to 2 percent slopes, is a phase of the Alpha series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes, associations, or undifferentiated groups.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Alpha-Beta complex, 0 to 6 percent slopes, is an example.

An *association* is made up of two or more geographically associated soils or miscellaneous areas that are shown as one unit on the maps. Because of present or anticipated uses of the map units in the survey area, it was not considered practical or necessary to map the soils or miscellaneous areas separately. The pattern and relative proportion of the soils or miscellaneous areas are somewhat similar. Alpha-Beta association, 0 to 2 percent slopes, is an example.

An *undifferentiated group* is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion of the soils or miscellaneous areas in a mapped area are not uniform. An area can be made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. Alpha and Beta soils, 0 to 2 percent slopes, is an example.

Some surveys include *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Rock outcrop is an example.

Eddy Area, New Mexico

KM—Kermit-Berino fine sands, 0 to 3 percent slopes

Map Unit Setting

National map unit symbol: 1w4q
Elevation: 3,100 to 4,200 feet
Mean annual precipitation: 10 to 14 inches
Mean annual air temperature: 60 to 64 degrees F
Frost-free period: 190 to 230 days
Farmland classification: Not prime farmland

Map Unit Composition

Kermit and similar soils: 50 percent
Berino and similar soils: 35 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Kermit

Setting

Landform: Plains, alluvial fans
Landform position (three-dimensional): Talf, rise
Down-slope shape: Convex, linear
Across-slope shape: Linear
Parent material: Mixed alluvium and/or eolian sands

Typical profile

H1 - 0 to 7 inches: fine sand
H2 - 7 to 60 inches: fine sand

Properties and qualities

Slope: 0 to 3 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Excessively drained
Runoff class: Negligible
Capacity of the most limiting layer to transmit water (Ksat): Very high (20.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Maximum salinity: Nonsaline (0.0 to 1.0 mmhos/cm)
Sodium adsorption ratio, maximum: 1.0
Available water supply, 0 to 60 inches: Low (about 3.1 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 7e
Hydrologic Soil Group: A
Ecological site: R070BD005NM - Deep Sand
Hydric soil rating: No

Description of Berino

Setting

Landform: Plains, fan piedmonts
Landform position (three-dimensional): Riser

Down-slope shape: Convex
Across-slope shape: Linear
Parent material: Mixed alluvium and/or eolian sands

Typical profile

H1 - 0 to 17 inches: fine sand
H2 - 17 to 50 inches: fine sandy loam
H3 - 50 to 58 inches: loamy sand

Properties and qualities

Slope: 0 to 3 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Runoff class: Low
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.60 to 2.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 40 percent
Maximum salinity: Very slightly saline to slightly saline (2.0 to 4.0 mmhos/cm)
Sodium adsorption ratio, maximum: 1.0
Available water supply, 0 to 60 inches: Moderate (about 7.2 inches)

Interpretive groups

Land capability classification (irrigated): 4e
Land capability classification (nonirrigated): 7e
Hydrologic Soil Group: B
Ecological site: R070BD003NM - Loamy Sand
Hydric soil rating: No

Minor Components

Active dune land

Percent of map unit: 15 percent
Hydric soil rating: No

References

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USDA Natural Resources Conservation Service

Ecological site R070BD005NM
Deep Sand

Accessed: 06/21/2023

General information

Provisional. A provisional ecological site description has undergone quality control and quality assurance review. It contains a working state and transition model and enough information to identify the ecological site.

Figure 1. Mapped extent

Areas shown in blue indicate the maximum mapped extent of this ecological site. Other ecological sites likely occur within the highlighted areas. It is also possible for this ecological site to occur outside of highlighted areas if detailed soil survey has not been completed or recently updated.

Table 1. Dominant plant species

Tree	Not specified
Shrub	Not specified
Herbaceous	Not specified

Physiographic features

This site occurs on terraces, Piedmonts, dunes fields, or upland plains. Parent material consists of eolian deposits and alluvium derived from sandstone. Slopes range from 0 to 15 percent, usually less than 5 percent. Low, stabilized hummocks or dunes frequently occur. Elevations range from 2,842 to 4,500 feet.

Table 2. Representative physiographic features

Landforms	(1) Dune (2) Parna dune (3) Terrace
Flooding frequency	None
Ponding frequency	None
Elevation	2,842–4,500 ft
Slope	0–15%
Aspect	Aspect is not a significant factor

Climatic features

The average annual precipitation ranges from 8 to 13 inches. Variations of 5 inches, more or less, are common. Over 80 percent of the precipitation falls from April through October. Most of the summer precipitation comes in the form of high intensity – short duration thunderstorms.

Temperatures are characterized by distinct seasonal changes and large annual and diurnal temperature changes. The average annual temperature is 61 degrees with extremes of 25 degrees below zero in the winter to 112 degrees in the summer.

The average frost-free season is 207 to 220 days. The last killing frost is in late March or early April, and the first killing frost is in late October or early November.

Both temperature and moisture favor warm season perennial plant growth. During years of abundant winter and early spring moisture, cool season growth and annual forbs, make up an important component of this site. Strong winds blow from the west from January through June, which accelerates soil drying during a critical period for cool

season plant growth.

Climate data was obtained from http://www.wrcc.sage.dri.edu/summary/climsmnm.html web site using 50% probability for freeze-free and frost-free seasons using 28.5 degrees F and 32.5 degrees F respectively.

Table 3. Representative climatic features

Frost-free period (average)	221 days
Freeze-free period (average)	240 days
Precipitation total (average)	13 in

Influencing water features

This site is not influenced from water from wetlands or streams.

Soil features

Soils are deep or very deep. Surface textures are sand loam, fine sand or loamy fine sand, Underlying material textures are loamy fine sand, fine sand, sand or fine sandy loam. Because of the coarse textures and rapid drying of the surface, the soil, if unprotected by plant cover and organic residue, becomes windblown and low hummocks or dunes are formed around shrubs.

Characteristic soils are:
Anthony
Aguena
Kermit
Likes
Pintura
Bluepoint

Table 4. Representative soil features

Surface texture	(1) Sand (2) Fine sand (3) Loamy fine sand
Family particle size	(1) Sandy
Drainage class	Well drained to excessively drained
Permeability class	Moderate to very rapid
Soil depth	60–72 in
Surface fragment cover <=3"	0–5%
Surface fragment cover >3"	0%
Available water capacity (0-40in)	3–5 in
Calcium carbonate equivalent (0-40in)	5–15%
Electrical conductivity (0-40in)	0–4 mmhos/cm
Sodium adsorption ratio (0-40in)	0–2
Soil reaction (1:1 water) (0-40in)	6.6–7.8

Subsurface fragment volume <=3" (Depth not specified)	5–10%
Subsurface fragment volume >3" (Depth not specified)	0%

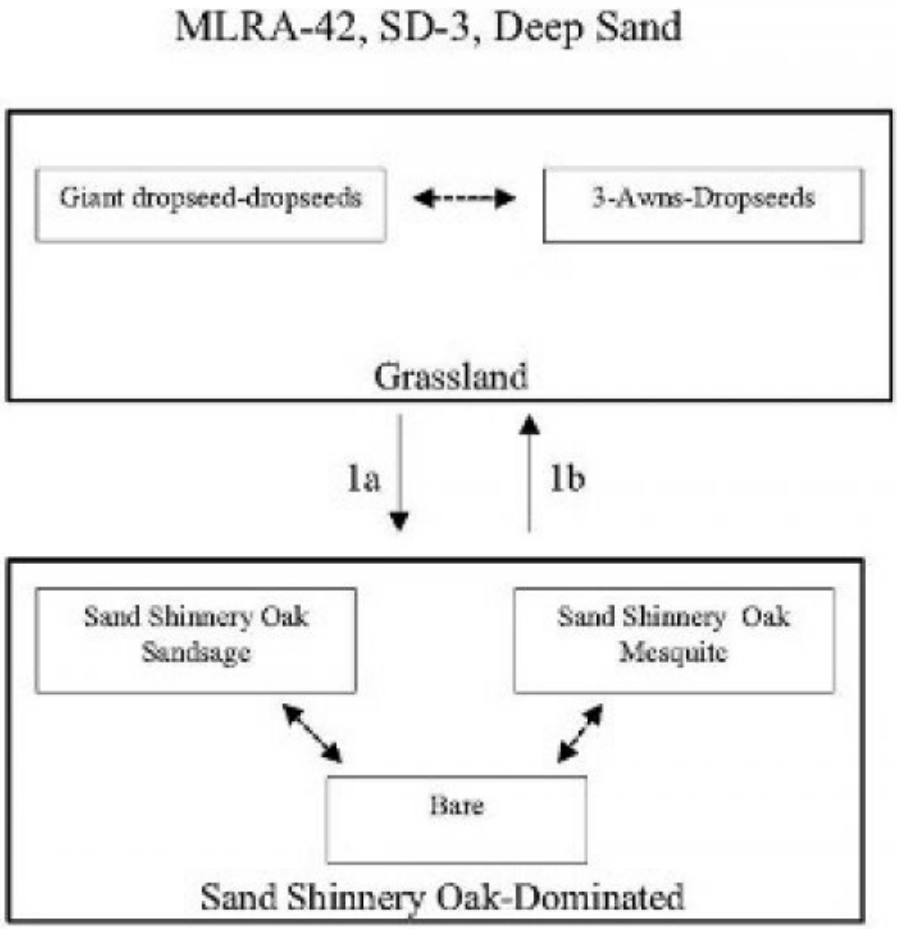
Ecological dynamics

Overview

The Deep Sand site occurs adjacent to and/or intergraded with the Sandhills and Sandy sites (SD-3). The Deep Sand site can be distinguished by slopes less than eight percent (approximately five percent) and textural changes at depths greater than 40 inches. The Deep Sand site has well drained soils with a surface texture of sand or loamy fine sand. The Sandhills site has slopes greater than eight percent and textural depths greater than 60 inches. Conversely, the Sandy site has slopes less than five percent and depths to textural change commonly around 20 inches. The historic plant community of the Deep Sand site is dominated primarily by giant dropseed (*Sporobolus giganteus*) and other dropseeds (*S. flexuosus*, *S. contractus*, *S. cryptandrus*), with scattered shinnery oak (*Quercus havardii*) and soapweed yucca (*Yucca glauca*). Other herbaceous species include threeawns (Aristida spp.), bluestems (*Schizachyrium scoparium* and *Andropogon hallii*), and annual and perennial forbs distributed relative to precipitation occurrences. Bare ground and litter compose a significant proportion of ground cover while grasses are the remainder. Shinnery oak will increase with an associated decrease in dropseed and bluestem abundance possibly due to climatic change, fire suppression, interspecific competition, and excessive grazing. Continued grass cover loss may result in a transition to a shinnery oak dominated state with increases in sand sage (*Artemisia filifolia*) and honey mesquite (*Prosopis glandulosa*). However, brush management may restore the grassland component and reverse the shinnery oak state back toward the historic plant community.

State and transition model

Plant Communities and Transitional Pathways (diagram)



1.a Climate, fire suppression, competition, over grazing

1.b Brush control, Prescribed grazing

State 1
Historic Climax Plant Community

Community 1.1
Historic Climax Plant Community

State Containing Historic Plant Community Grassland: The historic plant community is dominated by giant dropseed, other dropseeds, threeawns, and bluestems. Dominant woody plants include shinnery oak and soapweed yucca. Forb abundance and distribution varies and is dependent on annual rainfall. The Deep Sand site typically exists in sandy plains and dunes (Sosebee 1983). Grass dominance stabilizes the potentially erosive sandy soils. Historical fire suppression, however, may have contributed to increased woody plant abundance, which has reduced grass species. Further, drought conditions compounded with excessive grazing likely has driven most grass species out of competition with shrubs which has resulted in a shinnery oak dominated state with sand sage and mesquite (Young et al. 1948). Diagnosis: Grassland dominated by dropseeds, threeawns, and bluestems. Small shrubs, such as shinnery oak and soapweed yucca, and subshrubs are dispersed throughout the grassland. Other grasses that could appear on this site would include: flatsedge, almejita signalgrass, big bluestem, Indiangrass, fall witchgrass, hairy grama and red lovegrass Other shrubs include: fourwing saltbush, mesquite, ephedra and broom snakeweed. Other forbs include: wooly and scarlet gaura, wooly dalea, phlox heliotrope, scorpionweed, deerstongue, fleabane, nama, hoffmanseggia, lemon beebalm and stickleaf.

Table 5. Annual production by plant type

Plant Type	Low (Lb/Acre)	Representative Value (Lb/Acre)	High (Lb/Acre)
Grass/Grasslike	396	858	1320
Shrub/Vine	108	234	360
Forb	96	208	320
Total	**600**	**1300**	**2000**

Table 6. Ground cover

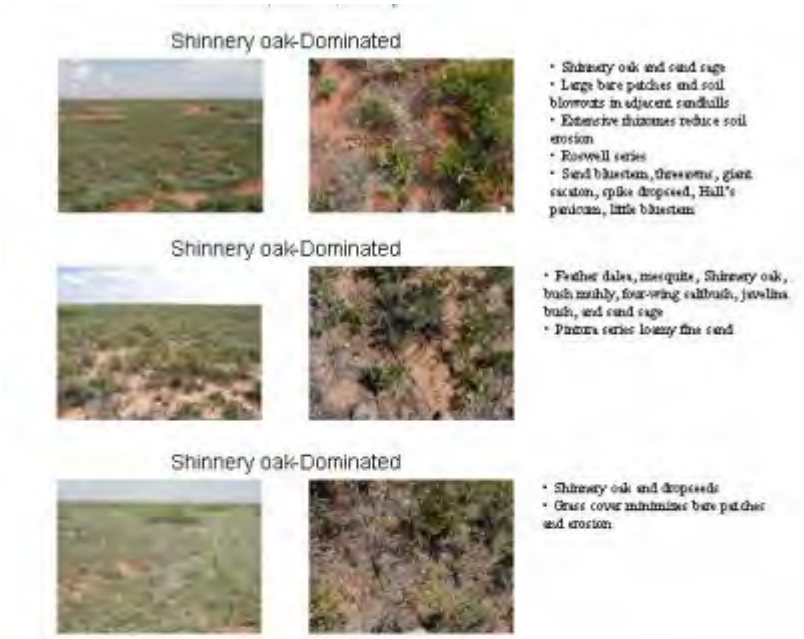
Tree foliar cover	0%
Shrub/vine/liana foliar cover	0%
Grass/grasslike foliar cover	15-20%
Forb foliar cover	0%
Non-vascular plants	0%
Biological crusts	0%
Litter	35-40%
Surface fragments >0.25" and <=3"	0%
Surface fragments >3"	0%
Bedrock	0%
Water	0%
Bare ground	35-40%

Figure 5. Plant community growth curve (percent production by month). NM2805, HCPC. SD-3 Deep Sand - Warm season plant community .

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0	0	3	5	10	10	25	30	12	5	0	0

State 2
Shinnery Oak Dominated

Community 2.1
Shinnery Oak Dominated



Shinnery Oak Dominated: This state is dominated by shinnery oak with subdominants of sand sage or mesquite. Bare ground is a significant component in this state as well. shinnery oak is characterized by dense stands in sandy soils; however, as clay percentage increases, shinnery oak decreases. Shinnery oak abundance and distribution increase with disturbances, such as excessive grazing and fire, due to an aggressive rhizome system. As shinnery oak abundance increases, an associated increase of mesquite, sand sage, and soapweed yucca also occurs. Shinnery oak's extensive root system allows the oak to competitively exclude grasses and forbs. Sand sage, however, stabilizes light sandy soils from wind erosion and can co-exist with herbaceous species by protecting them in heavily grazed conditions (Davis and Bonham 1979). Shinnery oak has been found primarily in very deep, excessively drained, and rapidly permeable soils. Shinnery oak is associated with landforms which are gently undulating to rolling uplands, very gently sloping to moderately steep slopes, and upland plains, alluvial fans and valley sideslopes. Shinnery oak and sand sage can be controlled with herbicide if applied in the spring with a subsequent rest from grazing (Herbel et al. 1979, Pettit 1986). In addition, repetitive seasons of goat browsing can also reduce shinnery oak abundance. Patches should be maintained during brush control, however, to prevent erosion and to provide wildlife cover and forage. Further, as shinnery oak and other shrubs increase, bare patches and erosion will increase due to a lack of herbaceous ground cover. Diagnosis: Shinnery oak dominated with subdominant sand sage, honey mesquite, and soapweed yucca with increasing frequency and size of bare patches. Transition to Shinnery oak dominated state (1a): The historic plant community begins to shift toward the shinnery oak dominated state as drivers such as climate change, fire suppression, interspecific competition, and excessive grazing contribute to alterations in soil properties and herbaceous cover. Cover loss and surface soil erosion are initial indicators of transition followed by an increase of shrub species abundance and bare patch expansion. Key indicators of approach to transition: • Loss of grass and forb cover • Surface soil erosion • Bare patch expansion • Increased shrub species abundance and composition Transition to Historic Plant Community (1b): The shinnery oak dominated state may transition back toward the historic plant community as new drivers are introduced such as prescribed grazing, brush control, and discontinued drought conditions.

Additional community tables

Table 7. Community 1.1 plant community composition

Group	Common Name	Symbol	Scientific Name	Annual Production (Lb/Acre)	Foliar Cover (%)

Grass/Grasslike					
1	**Warm Season**			450–585	
	spike dropseed	SPCO4	*Sporobolus contractus*	450–585	–
	sand dropseed	SPCR	*Sporobolus cryptandrus*	450–585	–
	mesa dropseed	SPFL2	*Sporobolus flexuosus*	450–585	–
	giant dropseed	SPGI	*Sporobolus giganteus*	450–585	–
2	**Warm Season**			65–104	
	sand bluestem	ANHA	*Andropogon hallii*	65–104	–
	little bluestem	SCSC	*Schizachyrium scoparium*	65–104	–
3	**Warm Season**			39–91	
	threeawn	ARIST	*Aristida*	39–91	–
4	**Warm Season**			13–39	
	thin paspalum	PASE5	*Paspalum setaceum*	13–39	–
5	**Warm Season**			13–39	
	black grama	BOER4	*Bouteloua eriopoda*	13–39	–
6	**Warm Season**			13–39	
	mat sandbur	CELO3	*Cenchrus longispinus*	13–39	–
7	**Warm Season**			13–39	
	Havard's panicgrass	PAHA2	*Panicum havardii*	13–39	–
8	**Warm Season**			13–65	
	plains bristlegrass	SEVU2	*Setaria vulpiseta*	13–65	–
9	**Other Annual Grasses**			13–65	
	Grass, annual	2GA	*Grass, annual*	13–65	–
Shrub/Vine					
10	**Shrub**			65–130	
	Havard oak	QUHA3	*Quercus havardii*	65–130	–
11	**Shrub**			13–39	
	sand sagebrush	ARFI2	*Artemisia filifolia*	13–39	–
12	**Shrub**			65–130	
	yucca	YUCCA	*Yucca*	65–130	–
13	**Shrub**			13–39	
	rabbitbrush	CHRYS9	*Chrysothamnus*	13–39	–
14	**Other Shrubs**			13–39	
	Shrub (>.5m)	2SHRUB	*Shrub (>.5m)*	13–39	–
Forb					
15	**Forb**			39–91	
	croton	CROTO	*Croton*	39–91	–
	Indian blanket	GAPU	*Gaillardia pulchella*	39–91	–
16	**Forb**			39–91	
	aster	ASTER	*Aster*	39–91	–
	whitest evening primrose	OEAL	*Oenothera albicaulis*	39–91	–
	beardtongue	PENST	*Penstemon*	39–91	–
17	**Forb**			39–91	
	touristplant	DIWI2	*Dimorphocarpa wislizeni*	39–91	–

	[illegible]	[illegible]	[illegible]	[illegible]	
	buckwheat	ERIOG	*Eriogonum*	39–91	–
	sunflower	HELIA3	*Helianthus*	39–91	–
	spiny false fiddleleaf	HYSP	*Hydrolea spinosa*	39–91	–
	threadleaf ragwort	SEFLF	*Senecio flaccidus var. flaccidus*	39–91	–
18	**Other Forbs**			13–65	
	Forb (herbaceous, not grass nor grass-like)	2FORB	*Forb (herbaceous, not grass nor grass-like)*	13–65	–

Animal community

This site provides habitat which supports a resident animal population characterized by pronghorn, antelope, black-tailed jackrabbit, spotted ground squirrel, Ord's kangaroo rat, northern grasshopper mouse, southern plains woodrat, badger, meadowlark, roadrunner, white-necked raven, cactus wren, lesser prairie chicken, morning dove, scaled quail, Harris hawk, side blotched lizard, marbled whiptail, Texas horned lizard, western diamondback rattlesnake and ornate box turtle. In the area called Mescalero Sands, there are white-tailed and mule deer.

Hydrological functions

The runoff curve numbers are determined by field investigations using hydraulic cover conditions and hydrologic soil groups.
Hydrologic Interpretations
Soil Series Hydrologic Group
Anthony B
Bluepoint A
Kermit A
Aguena A
Likes A
Pintura A

Recreational uses

This site offers limited recreation potential for hiking, horseback riding, nature observation and photography; game bird, predator, antelope, and deer hunting.

Wood products

This site has no potential for wood products.

Other products

This site is suitable for grazing by all kinds and classes of livestock during all seasons of the year. Shinnery oak is toxic in the late bud or early leaf stage. Shinnery oak will increase, as will sand sagebrush following drought. Changes in the fire return interval have also favored an increase in shrub cover. The dropseeds and bluestem will decrease. This site responds very well to brush manangement and deferment. This site is well suited to a grazing system that rotates the season of use. Nesting habitat for lesser prairie chicken can be improved by providing residual cover that is at least 14 inches high.

Other information

Guide to Suggested Initial Stocking Rate Acres per Animal Unit Month

Similarity Index Ac/AUM
100 - 76 2.0 – 3.8
75 – 51 3.0 – 6.0

50 – 26 5.0 – 10.0
25 – 0 10.1 +

Inventory data references

Other References:
Data collection for this site was done in conjunction with the progressive soil surveys within the Southern Desertic Basins, Plains and Mountains, Major Land Resource Areas of New Mexico. This site has been mapped and correlated with soils in the following soil surveys. Eddy County, Lea County, and Chaves County.

Other references

Literature Cited

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Sosebee, Ronald E. 1983. Physiological, phenological, and environmental considerations in brush and weed control. In: McDaniel, Kirk C., ed. Proceedings--brush management symposium; 1983 February 16; Albuquerque, NM. Denver, CO: Society for Range Management: 27-43.

Young, Vernon A., Anderwald, Frank R.,McCully, Wayne G. 1948. Brush problems on Texas ranges. Miscellaneous Publication 21. College Station, TX: Texas Agricultural Experiment Station. 19 p.

Contributors

Don Sylvester
Quinn Hodgson

Rangeland health reference sheet

Interpreting Indicators of Rangeland Health is a qualitative assessment protocol used to determine ecosystem condition based on benchmark characteristics described in the Reference Sheet. A suite of 17 (or more) indicators are typically considered in an assessment. The ecological site(s) representative of an assessment location must be known prior to applying the protocol and must be verified based on soils and climate. Current plant community cannot be used to identify the ecological site.

Author(s)/participant(s)	
Contact for lead author	
Date	
Approved by	
Approval date	
Composition (Indicators 10 and 12) based on	Annual Production

Indicators

1. **Number and extent of rills:**

2. **Presence of water flow patterns:**

3. **Number and height of erosional pedestals or terracettes:**

4. **Bare ground from Ecological Site Description or other studies (rock, litter, lichen, moss, plant canopy are not bare ground):**

5. **Number of gullies and erosion associated with gullies:**

6. **Extent of wind scoured, blowouts and/or depositional areas:**

7. **Amount of litter movement (describe size and distance expected to travel):**

8. **Soil surface (top few mm) resistance to erosion (stability values are averages - most sites will show a range of values):**

9. **Soil surface structure and SOM content (include type of structure and A-horizon color and thickness):**

10. **Effect of community phase composition (relative proportion of different functional groups) and spatial distribution on infiltration and runoff:**

11. **Presence and thickness of compaction layer (usually none; describe soil profile features which may be mistaken for compaction on this site):**

12. **Functional/Structural Groups (list in order of descending dominance by above-ground annual-production or live foliar cover using symbols: >>, >, = to indicate much greater than, greater than, and equal to):**

    Dominant:

    Sub-dominant:

    Other:

    Additional:

13. **Amount of plant mortality and decadence (include which functional groups are expected to show mortality or**

decadence):

14. **Average percent litter cover (%) and depth (in):**

15. **Expected annual annual-production (this is TOTAL above-ground annual-production, not just forage annual-production):**

16. **Potential invasive (including noxious) species (native and non-native). List species which BOTH characterize degraded states and have the potential to become a dominant or co-dominant species on the ecological site if their future establishment and growth is not actively controlled by management interventions. Species that become dominant for only one to several years (e.g., short-term response to drought or wildfire) are not invasive plants. Note that unlike other indicators, we are describing what is NOT expected in the reference state for the ecological site:**

17. **Perennial plant reproductive capability:**

32.15396, -103.92917
Show search results for 32.15396, -10...
Lithologic Units: Eolian and piedmont deposits
Label Qep
Name Eolian and piedmont deposits
LithClass sedimentary
PrimLith eolian and piedmont deposits
UnitDesc Eolian and piedmont deposits (Holocene to middle Pleistocene) – Interlayed eolian sands and piedmont-slope deposits
Zoom to
Qp
Pr
Pc
Qoa
Qa
Qep
Psl
Pqm
Qe
-103.889 32.002 Degrees

Closure Criteria Worksheet			
Site Name: Corral Fly SWD			
Spill Coordinates: 32.15396, -103.92917		**X: 600979**	**Y: 3558003**
Table 1. Closure Criteria Determination			
Site Specific Conditions		**Value**	**Unit**
1	Depth to Groundwater	**55**	feet
2	Within 300 feet of any continuously flowing watercourse or any other significant watercourse	1,954	feet
3	Within 200 feet of any lakebed, sinkhole or playa lake (measured from the ordinary high-water mark)	28,934	feet
4	Within 300 feet from an occupied residence, school, hospital, institution or church	20,275	feet
5	i) Within 500 feet of a spring or a private, domestic fresh water well used by less than five households for domestic or stock watering purposes, **or**	3,091	feet
	ii) Within 1000 feet of any fresh water well or spring		feet
6	Within incorporated municipal boundaries or within a defined municipal fresh water field covered under a municipal ordinance adopted pursuant to Section 3-27-3 NMSA 1978 as amended, unless the municipality specifically approves	No	(Y/N)
7	Within 300 feet of a wetland	2,904	feet
8	Within the area overlying a subsurface mine	No	(Y/N)
9	Within an unstable area (Karst Map)	Low	Critical High Medium Low
10	Within a 100-year Floodplain	500	year
11	Soil Type	Kermit-Berino fine sands, 0 to 3 percent slopes	
12	Ecological Classification	Deep Sand (R070BD005NM)	
13	Geology	Qep: Eolian and Piedmont deposits	
NMAC 19.15.29.12 E (Table 1) Closure Criteria		51-100'	<50' 51-100' >100'

APPENDIX C – Daily Field Reports

Daily Site Visit Report

Client:	Solaris Water Midstream	Inspection Date:	5/22/2023
Site Location Name:	Corral Fly SWD	Report Run Date:	5/22/2023 7:50 PM
Client Contact Name:	Fernando Carrasco	API #:	
Client Contact Phone #:	432-924-9416		
Unique Project ID		Project Owner:	
Project Reference #		Project Manager:	

Summary of Times

Arrived at Site	5/22/2023 9:30 AM
Departed Site	5/22/2023 11:19 AM

Daily Site Visit Report

Field Notes

10:48 Arrived on site and filled out safety paperwork.

10:48 Mapped release area.

10:48 Marked point of release.

11:18 Noted extensive rain water pools on pad over spill area.

11:03 Spill coordinates are here (32.1539733, -103.9292398).

11:03 Placed makings and flags for one call.

Next Steps & Recommendations

1

Daily Site Visit Report

Site Photos

Viewing Direction: South

Release area in northern point of spill.

Viewing Direction: North

Southern portion of spill area with rainwater pools.

Viewing Direction: Southwest

Release area from northern point of spill.

Viewing Direction: Southwest

Ground staining in middle of release area.

Daily Site Visit Report

Viewing Direction: South	**Viewing Direction**: East
Release area in southern portion of spill.	Mud cracks from release.
Viewing Direction: East	**Viewing Direction**: Northwest
Point of release in southern portion of spill.	Point of release with soil staining in southern portion of spill.

Daily Site Visit Report

Viewing Direction: North	**Viewing Direction**: North
Spill area in southern portion of release.	Containment berm for pad was successful at holding back the release from spilling onto the other pad.

Daily Site Visit Report

Daily Site Visit Signature

Inspector: Hunter Klein

Signature:

Daily Site Visit Report

Client:	Solaris Water Midstream	Inspection Date:	8/7/2023
Site Location Name:	Corral Fly SWD	Report Run Date:	8/7/2023 11:41 PM
Client Contact Name:	Fernando Carrasco	API #:	
Client Contact Phone #:	432-924-9416		
Unique Project ID		Project Owner:	
Project Reference #		Project Manager:	

Summary of Times

Arrived at Site	8/7/2023 8:00 AM
Departed Site	

Field Notes

9:36 Arrived at location and filled out safety paperwork and Solaris excavation safety checklist. Met with M&J Services, held safety meeting, and discussed the work plan for the day. Will excavate BS23-15, 19, 32, 34, and 38 to an additional 6in. Will recollect from these areas and test for chlorides and TPH.

12:53 Collected BS23-15, 19, 32, 34, and 38 @ 1ft bgs. Field screened soil samples for chlorides and TPH. All tested under NMAC 51-100 ft 19.15.29 criteria. Placed samples into glass jars and will send in for laboratory analysis. Updated sample points on Field Maps and DSS.

13:17 Dump trucks have continued to haul off materials to a designated disposal facility. Same dump trucks have brought in clean soil materials to prepare for backfill.

Next Steps & Recommendations

1

Daily Site Visit Report

Site Photos

Viewing Direction: Southwest	**Viewing Direction**: South
Overview of excavation	Overview of excavation
Viewing Direction: North	**Viewing Direction**: North
Overview of excavation	Overview of excavation

Daily Site Visit Report

Viewing Direction: West	**Viewing Direction**: Northwest
Eroded area on west edge of pad	Overview of excavation

Daily Site Visit Report

Daily Site Visit Signature

Inspector: Fernando Rodriguez

Signature:

APPENDIX D – Notifications

Gmail

Dhugal Hanton <vertexresourcegroupusa@gmail.com>

48-Hour Notification - Corral Fly SWD

2 messages

Dhugal Hanton <vertexresourcegroupusa@gmail.com> Wed, Jun 28, 2023 at 7:48 AM
To: "Enviro, OCD, EMNRD" <OCD.Enviro@emnrd.nm.gov>
Cc: rob.kirk@ariswater.com
Bcc: HKlein@vertex.ca

All,

Please accept this email as notification that Vertex Resource Services has scheduled a sampling event to be conducted at the following release.

nAPP2311343030

On Monday, July 3, 2023, at approximately 8:00 a.m., Vertex will be on-site to conduct confirmation sampling. The sampling will continue through Friday, July 7, 2023. If you have any questions regarding this notification, please call me at 575-988-1472.

Thank you,

Chance Dixon B.Sc.
Project Manager

Vertex Resource Services Inc.
3101 Boyd Drive,
Carlsbad, NM 88220

C 575.988.1472

Enviro, OCD, EMNRD <OCD.Enviro@emnrd.nm.gov> Wed, Jun 28, 2023 at 3:02 PM
To: Dhugal Hanton <vertexresourcegroupusa@gmail.com>
Cc: "Bratcher, Michael, EMNRD" <mike.bratcher@emnrd.nm.gov>, "Hamlet, Robert, EMNRD" <Robert.Hamlet@emnrd.nm.gov>

Chance,

Thank you for the notification. Please include a copy of this and all notifications in the remedial and/or closure reports to ensure the notifications are documented in the project file.

JH

Jocelyn Harimon ● Environmental Specialist

Environmental Bureau

EMNRD - Oil Conservation Division

1220 South St. Francis Drive | Santa Fe, NM 87505

(505)469-2821 | Jocelyn.Harimon@emnrd.nm.gov

http:// **www.emnrd.nm.gov**

From: Dhugal Hanton <vertexresourcegroupusa@gmail.com>
Sent: Wednesday, June 28, 2023 7:48 AM
To: Enviro, OCD, EMNRD <OCD.Enviro@emnrd.nm.gov>
Cc: rob.kirk@ariswater.com
Subject: [EXTERNAL] 48-Hour Notification - Corral Fly SWD

CAUTION: This email originated outside of our organization. Exercise caution prior to clicking on links or opening attachments.

[Quoted text hidden]

Gmail

Dhugal Hanton <vertexresourcegroupusa@gmail.com>

RE: [EXTERNAL]

1 message

Enviro, OCD, EMNRD <OCD.Enviro@emnrd.nm.gov> Thu, Jul 6, 2023 at 4:28 PM
To: Dhugal Hanton <vertexresourcegroupusa@gmail.com>
Cc: "Bratcher, Michael, EMNRD" <mike.bratcher@emnrd.nm.gov>, "Hamlet, Robert, EMNRD" <Robert.Hamlet@emnrd.nm.gov>

Chance,

The OCD has received your notification. Include a copy of this and all notifications in the remedial and/or closure reports to ensure the notifications are documented in the project file.

JH

Jocelyn Harimon ● Environmental Specialist

Environmental Bureau

EMNRD - Oil Conservation Division

1220 South St. Francis Drive | Santa Fe, NM 87505

(505)469-2821 | Jocelyn.Harimon@emnrd.nm.gov

http:// **www.emnrd.nm.gov**

From: Dhugal Hanton <vertexresourcegroupusa@gmail.com>
Sent: Thursday, July 6, 2023 4:17 PM
To: Enviro, OCD, EMNRD <OCD.Enviro@emnrd.nm.gov>
Cc: rob.kirk@ariswater.com
Subject: [EXTERNAL]

CAUTION: This email originated outside of our organization. Exercise caution prior to clicking on links or opening attachments.

All,

Please accept this email as notification that Vertex Resource Services has scheduled a sampling event to be conducted at the following release.

nAPP2311343030

On Tuesday, July 11, 2023, at approximately 8:00 a.m., Vertex will be on-site to conduct confirmation sampling. The sampling will continue through Friday, July 14, 2023. If you have any questions regarding this notification, please call me at 575-988-1472.

Thank you,

Chance Dixon B.Sc.
Project Manager

Vertex Resource Services Inc.
3101 Boyd Drive,
Carlsbad, NM 88220

C 575.988.1472

Gmail

Dhugal Hanton <vertexresourcegroupusa@gmail.com>

48-Hour Notification - Corral Fly SWD

2 messages

Dhugal Hanton <vertexresourcegroupusa@gmail.com> Wed, Jul 12, 2023 at 3:11 PM
To: "Enviro, OCD, EMNRD" <OCD.Enviro@emnrd.nm.gov>
Cc: rob.kirk@ariswater.com

All,

Please accept this email as notification that Vertex Resource Services has scheduled a sampling event to be conducted at the following release.

nAPP2311343030

On Monday, July 17, 2023, at approximately 8:00 a.m., Vertex will be on-site to conduct confirmation sampling. The sampling will continue through Friday, July 21, 2023. If you have any questions regarding this notification, please call me at 575-988-1472.

Thank you,

Chance Dixon B.Sc.
Project Manager

Vertex Resource Services Inc.
3101 Boyd Drive,
Carlsbad, NM 88220

C 575.988.1472

Enviro, OCD, EMNRD <OCD.Enviro@emnrd.nm.gov> Thu, Jul 13, 2023 at 8:02 AM
To: Dhugal Hanton <vertexresourcegroupusa@gmail.com>
Cc: "Bratcher, Michael, EMNRD" <mike.bratcher@emnrd.nm.gov>, "Hamlet, Robert, EMNRD" <Robert.Hamlet@emnrd.nm.gov>

Chance,

The OCD has received your notification. Include a copy of this and all notifications in the remedial and/or closure reports to ensure the notifications are documented in the project file.

JH

Jocelyn Harimon ● Environmental Specialist

Environmental Bureau

EMNRD - Oil Conservation Division

1220 South St. Francis Drive | Santa Fe, NM 87505

(505)469-2821 | Jocelyn.Harimon@emnrd.nm.gov

http:// **www.emnrd.nm.gov**

From: Dhugal Hanton <vertexresourcegroupusa@gmail.com>
Sent: Wednesday, July 12, 2023 3:11 PM
To: Enviro, OCD, EMNRD <OCD.Enviro@emnrd.nm.gov>
Cc: rob.kirk@ariswater.com
Subject: [EXTERNAL] 48-Hour Notification - Corral Fly SWD

CAUTION: This email originated outside of our organization. Exercise caution prior to clicking on links or opening attachments.

[Quoted text hidden]

Gmail

Dhugal Hanton <vertexresourcegroupusa@gmail.com>

48-Hour Notification - Corral Fly SWD

2 messages

Dhugal Hanton <vertexresourcegroupusa@gmail.com> Wed, Aug 2, 2023 at 9:05 AM
To: "Enviro, OCD, EMNRD" <OCD.Enviro@emnrd.nm.gov>
Cc: rob.kirk@ariswater.com
Bcc: FRodriguez@vertex.ca

All,

Please accept this email as notification that Vertex Resource Services has scheduled a sampling event to be conducted at the following release.

nAPP2311343030

On Monday, August 7, 2023, at approximately 8:00 a.m., Vertex will be on-site to conduct confirmation sampling. The sampling will continue through Friday, August 11, 2023. If you have any questions regarding this notification, please call me at 575-988-1472.

Thank you,

Chance Dixon B.Sc.
Project Manager

Vertex Resource Services Inc.
3101 Boyd Drive,
Carlsbad, NM 88220

C 575.988.1472

Wells, Shelly, EMNRD <Shelly.Wells@emnrd.nm.gov> Wed, Aug 2, 2023 at 9:17 AM
To: Dhugal Hanton <vertexresourcegroupusa@gmail.com>
Cc: "Bratcher, Michael, EMNRD" <mike.bratcher@emnrd.nm.gov>, "Hamlet, Robert, EMNRD" <Robert.Hamlet@emnrd.nm.gov>

Good morning Chance,

The OCD has received your notification. Include a copy of this and all notifications in the remedial and/or closure reports to ensure the notifications are documented in the project file.

Thank you,

Shelly

Shelly Wells * Environmental Specialist-Advanced

Administrative Permitting Program

EMNRD-Oil Conservation Division

1220 S. St. Francis Drive|Santa Fe, NM 87505

(505)469-7520|Shelly.Wells@emnrd.nm.gov

http://www.emnrd.state.nm.us/OCD/

From: Dhugal Hanton <vertexresourcegroupusa@gmail.com>
Sent: Wednesday, August 2, 2023 9:06 AM
To: Enviro, OCD, EMNRD <OCD.Enviro@emnrd.nm.gov>
Cc: rob.kirk@ariswater.com
Subject: [EXTERNAL] 48-Hour Notification - Corral Fly SWD

CAUTION: This email originated outside of our organization. Exercise caution prior to clicking on links or opening attachments.

[Quoted text hidden]

From: Rob Kirk
To: OCDOnline@state.nm.us
Cc: eco@slo.state.nm.us; Chance Dixon
Subject: Corral Fly SWD release, nAPP2311343030
Date: July 20, 2023 9:35:55 AM
Attachments: image001.png

Hello OCD, SLO,

Please accept this email as notification that Aris Water will need additional time to address this release per NMAC 19.15.29.

The project work is almost complete delayed by workload and weather.

nAPP2311343030

Please let me know if you have any questions.

Regards

Rob Kirk
VP & GM, HSE and Compliance
Aris Water Solutions
C: (469) 978-5620

Rob Kirk
VP, Environmental Compliance
Aris Water
469-978-5620

Disclaimer

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APPENDIX E – Laboratory Data Reports and Chain of Custody Forms

eurofins | Environment Testing

ANALYTICAL REPORT

PREPARED FOR

Attn: Chance Dixon
Vertex
3101 Boyd Dr
Carlsbad, New Mexico 88220

Generated 6/5/2023 2:30:53 PM

JOB DESCRIPTION

Corral Fly
SDG NUMBER 23E-02502

JOB NUMBER

890-4746-1

Eurofins Carlsbad
1089 N Canal St.
Carlsbad NM 88220

See page two for job notes and contact information.

Released to Imaging: 7/26/2024 3:39:45 PM

my EOL

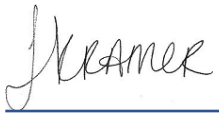
Eurofins Carlsbad

Job Notes

This report may not be reproduced except in full, and with written approval from the laboratory. The results relate only to the samples tested. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

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
6/5/2023 2:30:53 PM

Authorized for release by
Jessica Kramer, Project Manager
Jessica.Kramer@et.eurofinsus.com
(432)704-5440

Client: Vertex
Project/Site: Corral Fly

Laboratory Job ID: 890-4746-1
SDG: 23E-02502

Table of Contents

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Eurofins Carlsbad
6/5/2023

Definitions/Glossary

Client: Vertex
Project/Site: Corral Fly

Job ID: 890-4746-1
SDG: 23E-02502

Qualifiers

GC VOA

Qualifier	Qualifier Description
*+	LCS and/or LCSD is outside acceptance limits, high biased.
S1-	Surrogate recovery exceeds control limits, low biased.
U	Indicates the analyte was analyzed for but not detected.

GC Semi VOA

Qualifier	Qualifier Description
*1	LCS/LCSD RPD exceeds control limits.
F1	MS and/or MSD recovery exceeds control limits.
F2	MS/MSD 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: Vertex
Project/Site: Corral Fly

Job ID: 890-4746-1
SDG: 23E-02502

Job ID: 890-4746-1

Laboratory: Eurofins Carlsbad

Narrative

Job Narrative
890-4746-1

Receipt
The samples were received on 5/26/2023 8:15 AM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 0.8°C

Receipt Exceptions
The following samples were received and analyzed from an unpreserved bulk soil jar: BH23-01 0' (890-4746-1), BH23-01 2' (890-4746-2), BH23-01 4' (890-4746-3), BH23-02 0' (890-4746-4), BH23-02 2' (890-4746-5), BH23-02 4' (890-4746-6), BH23-03 0' (890-4746-7), BH23-03 2' (890-4746-8) and BH23-03 4' (890-4746-9).

The following sample was submitted for analysis; however, it was not listed on the Chain-of-Custody (COC): BH23-03 4' (890-4746-9) per client added to job for all methods

GC VOA
Method 8021B: The continuing calibration verification (CCV) associated with batch 880-54618 recovered above the upper control limit for Benzene. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. The associated samples are impacted: (CCV 880-54618/2), (CCV 880-54618/20), (CCV 880-54618/51) and (CCV 880-54618/64).

Method 8021B: The surrogate recovery for the blank associated with preparation batch 880-54500 and 880-54501 and analytical batch 880-54618 was outside the control limits.

Method 8021B: The laboratory control sample (LCS) and / or laboratory control sample duplicate (LCSD) for preparation batch 880-54501 and analytical batch 880-54618 recovered outside control limits for the following analytes: Benzene. These analytes were biased high in the LCS and were not detected in the associated samples; therefore, the data have been reported.

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 surrogate recovery for the blank associated with preparation batch 880-54340 and analytical batch 880-54334 was outside the upper control limits.

Method 8015MOD_NM: Surrogate recovery for the following samples were outside control limits: (CCV 880-54334/20), (CCV 880-54334/31), (CCV 880-54334/47), (CCV 880-54334/5), (CCV 880-54334/58), (LCS 880-54340/2-A) and (LCSD 880-54340/3-A). Evidence of matrix interferences is not obvious.

Method 8015MOD_NM: Surrogate recovery for the following samples were outside control limits: BH23-01 0' (890-4746-1), BH23-01 2' (890-4746-2), BH23-01 4' (890-4746-3), BH23-02 0' (890-4746-4), BH23-02 2' (890-4746-5), BH23-02 4' (890-4746-6), BH23-03 0' (890-4746-7), BH23-03 2' (890-4746-8), (890-4746-A-1-B MS) and (890-4746-A-1-C MSD). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8015MOD_NM: The matrix spike / matrix spike duplicate (MS/MSD) recoveries and precision for preparation batch 880-54340 and analytical batch 880-54334 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample / laboratory sample control duplicate (LCS/LCSD) precision was within acceptance limits.

Method 8015MOD_NM: The RPD of the laboratory control sample (LCS) and laboratory control sample duplicate (LCSD) for preparation batch 880-54340 and analytical batch 880-54334 recovered outside control limits for the following analytes: Diesel Range Organics (Over C10-C28).

Method 8015MOD_NM: The surrogate recovery for the blank associated with preparation batch 880-54430 and analytical batch 880-54330 was outside the upper control limits.

Case Narrative

Client: Vertex
Project/Site: Corral Fly

Job ID: 890-4746-1
SDG: 23E-02502

Job ID: 890-4746-1 (Continued)

Laboratory: Eurofins Carlsbad (Continued)

Method 8015MOD_NM: Surrogate recovery for the following sample was outside control limits: (890-4744-A-1-C). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8015MOD_NM: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 880-54430 and analytical batch 880-54330 were outside control limits for one or more analytes. See QC Sample Results for detail. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery is within acceptance 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: Vertex
Project/Site: Corral Fly

Job ID: 890-4746-1
SDG: 23E-02502

Client Sample ID: BH23-01 0'

Lab Sample ID: 890-4746-1
Matrix: Solid
Date Collected: 05/25/23 10:00
Date Received: 05/26/23 08:15
Sample Depth: 0'

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		05/31/23 13:35	06/03/23 05:40	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		05/31/23 13:35	06/03/23 05:40	1
Toluene	<0.00199	U	0.00199		mg/Kg		05/31/23 13:35	06/03/23 05:40	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		05/31/23 13:35	06/03/23 05:40	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		05/31/23 13:35	06/03/23 05:40	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		05/31/23 13:35	06/03/23 05:40	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*101*		*70 - 130*	*05/31/23 13:35*	*06/03/23 05:40*	*1*
1,4-Difluorobenzene (Surr)	*94*		*70 - 130*	*05/31/23 13:35*	*06/03/23 05:40*	*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			06/05/23 12:45	1

Method: SW846 8015 NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**65.5**		50.0		mg/Kg			05/31/23 09:22	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 F1 F2	50.0		mg/Kg		05/30/23 08:50	05/30/23 11:39	1
Diesel Range Organics (Over C10-C28)	**65.5**	**F1 F2 *1**	50.0		mg/Kg		05/30/23 08:50	05/30/23 11:39	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		05/30/23 08:50	05/30/23 11:39	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*298*	*S1+*	*70 - 130*	*05/30/23 08:50*	*05/30/23 11:39*	*1*
o-Terphenyl	*272*	*S1+*	*70 - 130*	*05/30/23 08:50*	*05/30/23 11:39*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**564**		25.2		mg/Kg			05/31/23 17:38	5

Client Sample ID: BH23-01 2'

Lab Sample ID: 890-4746-2
Matrix: Solid
Date Collected: 05/25/23 10:05
Date Received: 05/26/23 08:15
Sample Depth: 2'

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00198	U *+	0.00198		mg/Kg		05/31/23 13:35	06/03/23 06:07	1
Ethylbenzene	<0.00198	U	0.00198		mg/Kg		05/31/23 13:35	06/03/23 06:07	1
Toluene	<0.00198	U	0.00198		mg/Kg		05/31/23 13:35	06/03/23 06:07	1
Xylenes, Total	<0.00396	U	0.00396		mg/Kg		05/31/23 13:35	06/03/23 06:07	1
m-Xylene & p-Xylene	<0.00396	U	0.00396		mg/Kg		05/31/23 13:35	06/03/23 06:07	1
o-Xylene	<0.00198	U	0.00198		mg/Kg		05/31/23 13:35	06/03/23 06:07	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*108*		*70 - 130*	*05/31/23 13:35*	*06/03/23 06:07*	*1*

Client Sample Results

Client: Vertex
Project/Site: Corral Fly

Job ID: 890-4746-1
SDG: 23E-02502

Client Sample ID: BH23-01 2'

Date Collected: 05/25/23 10:05
Date Received: 05/26/23 08:15
Sample Depth: 2'

Lab Sample ID: 890-4746-2

Matrix: Solid

Method: SW846 8021B - Volatile Organic Compounds (GC) (Continued)

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Difluorobenzene (Surr)	*98*		*70 - 130*	*05/31/23 13:35*	*06/03/23 06:07*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00396	U	0.00396		mg/Kg			06/05/23 12:45	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			05/31/23 09:22	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		05/30/23 08:50	05/30/23 12:53	1
Diesel Range Organics (Over C10-C28)	<50.0	U *1	50.0		mg/Kg		05/30/23 08:50	05/30/23 12:53	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		05/30/23 08:50	05/30/23 12:53	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*276*	*S1+*	*70 - 130*	*05/30/23 08:50*	*05/30/23 12:53*	*1*
o-Terphenyl	*238*	*S1+*	*70 - 130*	*05/30/23 08:50*	*05/30/23 12:53*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**380**		4.99		mg/Kg			05/31/23 17:54	1

Client Sample ID: BH23-01 4'

Date Collected: 05/25/23 10:10
Date Received: 05/26/23 08:15
Sample Depth: 4'

Lab Sample ID: 890-4746-3

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		05/31/23 13:35	06/03/23 06:34	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		05/31/23 13:35	06/03/23 06:34	1
Toluene	<0.00199	U	0.00199		mg/Kg		05/31/23 13:35	06/03/23 06:34	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		05/31/23 13:35	06/03/23 06:34	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		05/31/23 13:35	06/03/23 06:34	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		05/31/23 13:35	06/03/23 06:34	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*107*		*70 - 130*	*05/31/23 13:35*	*06/03/23 06:34*	*1*
1,4-Difluorobenzene (Surr)	*95*		*70 - 130*	*05/31/23 13:35*	*06/03/23 06:34*	*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			06/05/23 12:45	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			05/31/23 09:22	1

Client Sample Results

Client: Vertex
Project/Site: Corral Fly

Job ID: 890-4746-1
SDG: 23E-02502

Client Sample ID: BH23-01 4'

Date Collected: 05/25/23 10:10
Date Received: 05/26/23 08:15
Sample Depth: 4'

Lab Sample ID: 890-4746-3
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		05/30/23 08:50	05/30/23 13:15	1
Diesel Range Organics (Over C10-C28)	<49.9	U *1	49.9		mg/Kg		05/30/23 08:50	05/30/23 13:15	1
OII Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		05/30/23 08:50	05/30/23 13:15	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*294*	*S1+*	*70 - 130*	*05/30/23 08:50*	*05/30/23 13:15*	*1*
o-Terphenyl	*256*	*S1+*	*70 - 130*	*05/30/23 08:50*	*05/30/23 13:15*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**160**		5.01		mg/Kg			05/31/23 18:00	1

Client Sample ID: BH23-02 0'

Date Collected: 05/25/23 10:15
Date Received: 05/26/23 08:15
Sample Depth: 0'

Lab Sample ID: 890-4746-4
Matrix: Solid

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		05/31/23 13:35	06/03/23 08:23	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		05/31/23 13:35	06/03/23 08:23	1
Toluene	<0.00200	U	0.00200		mg/Kg		05/31/23 13:35	06/03/23 08:23	1
Xylenes, Total	<0.00399	U	0.00399		mg/Kg		05/31/23 13:35	06/03/23 08:23	1
m-Xylene & p-Xylene	<0.00399	U	0.00399		mg/Kg		05/31/23 13:35	06/03/23 08:23	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		05/31/23 13:35	06/03/23 08:23	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*104*		*70 - 130*	*05/31/23 13:35*	*06/03/23 08:23*	*1*
1,4-Difluorobenzene (Surr)	*91*		*70 - 130*	*05/31/23 13:35*	*06/03/23 08:23*	*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			06/05/23 12:45	1

Method: SW846 8015 NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**93.4**		49.8		mg/Kg			05/31/23 09:22	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		05/30/23 08:50	05/30/23 13:36	1
Diesel Range Organics (Over C10-C28)	**93.4**	***1**	49.8		mg/Kg		05/30/23 08:50	05/30/23 13:36	1
OII Range Organics (Over C28-C36)	<49.8	U	49.8		mg/Kg		05/30/23 08:50	05/30/23 13:36	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*336*	*S1+*	*70 - 130*	*05/30/23 08:50*	*05/30/23 13:36*	*1*
o-Terphenyl	*308*	*S1+*	*70 - 130*	*05/30/23 08:50*	*05/30/23 13:36*	*1*

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Client Sample Results

Client: Vertex
Project/Site: Corral Fly

Job ID: 890-4746-1
SDG: 23E-02502

Client Sample ID: BH23-02 0'

Lab Sample ID: 890-4746-4
Matrix: Solid
Date Collected: 05/25/23 10:15
Date Received: 05/26/23 08:15
Sample Depth: 0'

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	970		24.8		mg/Kg			05/31/23 18:05	5

Client Sample ID: BH23-02 2'

Lab Sample ID: 890-4746-5
Matrix: Solid
Date Collected: 05/25/23 10:20
Date Received: 05/26/23 08:15
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		05/31/23 13:35	06/03/23 08:50	1
Ethylbenzene	<0.00201	U	0.00201		mg/Kg		05/31/23 13:35	06/03/23 08:50	1
Toluene	<0.00201	U	0.00201		mg/Kg		05/31/23 13:35	06/03/23 08:50	1
Xylenes, Total	<0.00402	U	0.00402		mg/Kg		05/31/23 13:35	06/03/23 08:50	1
m-Xylene & p-Xylene	<0.00402	U	0.00402		mg/Kg		05/31/23 13:35	06/03/23 08:50	1
o-Xylene	<0.00201	U	0.00201		mg/Kg		05/31/23 13:35	06/03/23 08:50	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*111*		*70 - 130*	*05/31/23 13:35*	*06/03/23 08:50*	*1*
1,4-Difluorobenzene (Surr)	*92*		*70 - 130*	*05/31/23 13:35*	*06/03/23 08:50*	*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			06/05/23 12:45	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			05/31/23 09:22	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		05/30/23 08:50	05/30/23 13:57	1
Diesel Range Organics (Over C10-C28)	<49.9	U *1	49.9		mg/Kg		05/30/23 08:50	05/30/23 13:57	1
OII Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		05/30/23 08:50	05/30/23 13:57	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*284*	*S1+*	*70 - 130*	*05/30/23 08:50*	*05/30/23 13:57*	*1*
o-Terphenyl	*252*	*S1+*	*70 - 130*	*05/30/23 08:50*	*05/30/23 13:57*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	2960		24.9		mg/Kg			05/31/23 18:11	5

Client Sample Results

Client: Vertex
Project/Site: Corral Fly

Job ID: 890-4746-1
SDG: 23E-02502

Client Sample ID: BH23-02 4'

Date Collected: 05/25/23 10:25
Date Received: 05/26/23 08:15
Sample Depth: 4'

Lab Sample ID: 890-4746-6
Matrix: Solid

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		05/31/23 13:35	06/03/23 09:17	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		05/31/23 13:35	06/03/23 09:17	1
Toluene	<0.00200	U	0.00200		mg/Kg		05/31/23 13:35	06/03/23 09:17	1
Xylenes, Total	<0.00401	U	0.00401		mg/Kg		05/31/23 13:35	06/03/23 09:17	1
m-Xylene & p-Xylene	<0.00401	U	0.00401		mg/Kg		05/31/23 13:35	06/03/23 09:17	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		05/31/23 13:35	06/03/23 09:17	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*110*		*70 - 130*	*05/31/23 13:35*	*06/03/23 09:17*	*1*
1,4-Difluorobenzene (Surr)	*93*		*70 - 130*	*05/31/23 13:35*	*06/03/23 09:17*	*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			06/05/23 12:45	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			05/31/23 09:22	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		05/30/23 08:50	05/30/23 14:19	1
Diesel Range Organics (Over C10-C28)	<50.0	U *1	50.0		mg/Kg		05/30/23 08:50	05/30/23 14:19	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		05/30/23 08:50	05/30/23 14:19	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*278*	*S1+*	*70 - 130*	*05/30/23 08:50*	*05/30/23 14:19*	*1*
o-Terphenyl	*245*	*S1+*	*70 - 130*	*05/30/23 08:50*	*05/30/23 14:19*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**1430**		25.0		mg/Kg			05/31/23 18:27	5

Client Sample ID: BH23-03 0'

Date Collected: 05/25/23 10:30
Date Received: 05/26/23 08:15
Sample Depth: 0'

Lab Sample ID: 890-4746-7
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		05/31/23 13:35	06/03/23 09:44	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		05/31/23 13:35	06/03/23 09:44	1
Toluene	<0.00199	U	0.00199		mg/Kg		05/31/23 13:35	06/03/23 09:44	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		05/31/23 13:35	06/03/23 09:44	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		05/31/23 13:35	06/03/23 09:44	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		05/31/23 13:35	06/03/23 09:44	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*109*		*70 - 130*	*05/31/23 13:35*	*06/03/23 09:44*	*1*

Client Sample Results

Client: Vertex
Project/Site: Corral Fly

Job ID: 890-4746-1
SDG: 23E-02502

Client Sample ID: BH23-03 0'

Lab Sample ID: 890-4746-7
Matrix: Solid
Date Collected: 05/25/23 10:30
Date Received: 05/26/23 08:15
Sample Depth: 0'

Method: SW846 8021B - Volatile Organic Compounds (GC) (Continued)

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Difluorobenzene (Surr)	*97*		*70 - 130*	*05/31/23 13:35*	*06/03/23 09:44*	*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			06/05/23 12:45	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			05/31/23 09:22	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		05/30/23 08:50	05/30/23 14:40	1
Diesel Range Organics (Over C10-C28)	<49.9	U *1	49.9		mg/Kg		05/30/23 08:50	05/30/23 14:40	1
OII Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		05/30/23 08:50	05/30/23 14:40	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*292*	*S1+*	*70 - 130*	*05/30/23 08:50*	*05/30/23 14:40*	*1*
o-Terphenyl	*254*	*S1+*	*70 - 130*	*05/30/23 08:50*	*05/30/23 14:40*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**804**		24.9		mg/Kg			05/31/23 18:32	5

Client Sample ID: BH23-03 2'

Lab Sample ID: 890-4746-8
Matrix: Solid
Date Collected: 05/25/23 10:35
Date Received: 05/26/23 08:15
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		05/31/23 13:35	06/03/23 10:10	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		05/31/23 13:35	06/03/23 10:10	1
Toluene	<0.00199	U	0.00199		mg/Kg		05/31/23 13:35	06/03/23 10:10	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		05/31/23 13:35	06/03/23 10:10	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		05/31/23 13:35	06/03/23 10:10	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		05/31/23 13:35	06/03/23 10:10	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*105*		*70 - 130*	*05/31/23 13:35*	*06/03/23 10:10*	*1*
1,4-Difluorobenzene (Surr)	*98*		*70 - 130*	*05/31/23 13:35*	*06/03/23 10:10*	*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			06/05/23 12:45	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			05/31/23 09:22	1

Client Sample Results

Client: Vertex
Project/Site: Corral Fly

Job ID: 890-4746-1
SDG: 23E-02502

Client Sample ID: BH23-03 2'

Lab Sample ID: 890-4746-8
Matrix: Solid
Date Collected: 05/25/23 10:35
Date Received: 05/26/23 08:15
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	<49.9	U	49.9		mg/Kg		05/30/23 08:50	05/30/23 15:01	1
Diesel Range Organics (Over C10-C28)	<49.9	U *1	49.9		mg/Kg		05/30/23 08:50	05/30/23 15:01	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		05/30/23 08:50	05/30/23 15:01	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*269*	*S1+*	*70 - 130*	*05/30/23 08:50*	*05/30/23 15:01*	*1*
o-Terphenyl	*232*	*S1+*	*70 - 130*	*05/30/23 08:50*	*05/30/23 15:01*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	4170		25.3		mg/Kg			05/31/23 18:38	5

Client Sample ID: BH23-03 4'

Lab Sample ID: 890-4746-9
Matrix: Solid
Date Collected: 05/25/23 10:40
Date Received: 05/26/23 08:15

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		05/31/23 13:35	06/03/23 10:37	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		05/31/23 13:35	06/03/23 10:37	1
Toluene	<0.00200	U	0.00200		mg/Kg		05/31/23 13:35	06/03/23 10:37	1
Xylenes, Total	<0.00399	U	0.00399		mg/Kg		05/31/23 13:35	06/03/23 10:37	1
m-Xylene & p-Xylene	<0.00399	U	0.00399		mg/Kg		05/31/23 13:35	06/03/23 10:37	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		05/31/23 13:35	06/03/23 10:37	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*109*		*70 - 130*	*05/31/23 13:35*	*06/03/23 10:37*	*1*
1,4-Difluorobenzene (Surr)	*99*		*70 - 130*	*05/31/23 13:35*	*06/03/23 10:37*	*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			06/05/23 12:45	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			05/31/23 13:03	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		05/30/23 16:10	05/30/23 20:53	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		05/30/23 16:10	05/30/23 20:53	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		05/30/23 16:10	05/30/23 20:53	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*102*		*70 - 130*	*05/30/23 16:10*	*05/30/23 20:53*	*1*
o-Terphenyl	*113*		*70 - 130*	*05/30/23 16:10*	*05/30/23 20:53*	*1*

Client Sample Results

Client: Vertex
Project/Site: Corral Fly

Job ID: 890-4746-1
SDG: 23E-02502

Client Sample ID: BH23-03 4'
Date Collected: 05/25/23 10:40
Date Received: 05/26/23 08:15

Lab Sample ID: 890-4746-9
Matrix: Solid

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	1720		24.9		mg/Kg			05/31/23 18:43	5

Surrogate Summary

Client: Vertex
Project/Site: Corral Fly

Job ID: 890-4746-1
SDG: 23E-02502

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)
890-4740-A-21-D MS	Matrix Spike	98	107
890-4740-A-21-E MSD	Matrix Spike Duplicate	103	93
890-4746-1	BH23-01 0'	101	94
890-4746-2	BH23-01 2'	108	98
890-4746-3	BH23-01 4'	107	95
890-4746-4	BH23-02 0'	104	91
890-4746-5	BH23-02 2'	111	92
890-4746-6	BH23-02 4'	110	93
890-4746-7	BH23-03 0'	109	97
890-4746-8	BH23-03 2'	105	98
890-4746-9	BH23-03 4'	109	99
LCS 880-54501/1-A	Lab Control Sample	86	91
LCSD 880-54501/2-A	Lab Control Sample Dup	86	106
MB 880-54500/5-A	Method Blank	67 S1-	93
MB 880-54501/5-A	Method Blank	65 S1-	87

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)
890-4744-A-1-D MS	Matrix Spike	115	114
890-4744-A-1-E MSD	Matrix Spike Duplicate	118	118
890-4746-1	BH23-01 0'	298 S1+	272 S1+
890-4746-1 MS	BH23-01 0'	339 S1+	258 S1+
890-4746-1 MSD	BH23-01 0'	271 S1+	206 S1+
890-4746-2	BH23-01 2'	276 S1+	238 S1+
890-4746-3	BH23-01 4'	294 S1+	256 S1+
890-4746-4	BH23-02 0'	336 S1+	308 S1+
890-4746-5	BH23-02 2'	284 S1+	252 S1+
890-4746-6	BH23-02 4'	278 S1+	245 S1+
890-4746-7	BH23-03 0'	292 S1+	254 S1+
890-4746-8	BH23-03 2'	269 S1+	232 S1+
890-4746-9	BH23-03 4'	102	113
LCS 880-54340/2-A	Lab Control Sample	194 S1+	182 S1+
LCS 880-54430/2-A	Lab Control Sample	74	83
LCSD 880-54340/3-A	Lab Control Sample Dup	154 S1+	142 S1+
LCSD 880-54430/3-A	Lab Control Sample Dup	80	90
MB 880-54340/1-A	Method Blank	285 S1+	256 S1+
MB 880-54430/1-A	Method Blank	118	132 S1+

Surrogate Legend

1CO = 1-Chlorooctane
OTPH = o-Terphenyl

QC Sample Results

Client: Vertex
Project/Site: Corral Fly

Job ID: 890-4746-1
SDG: 23E-02502

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-54500/5-A
Matrix: Solid
Analysis Batch: 54618

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 54500

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		05/31/23 13:23	06/02/23 12:21	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		05/31/23 13:23	06/02/23 12:21	1
Toluene	<0.00200	U	0.00200		mg/Kg		05/31/23 13:23	06/02/23 12:21	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		05/31/23 13:23	06/02/23 12:21	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		05/31/23 13:23	06/02/23 12:21	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		05/31/23 13:23	06/02/23 12:21	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*67*	*S1-*	*70 - 130*	*05/31/23 13:23*	*06/02/23 12:21*	*1*
1,4-Difluorobenzene (Surr)	*93*		*70 - 130*	*05/31/23 13:23*	*06/02/23 12:21*	*1*

Lab Sample ID: MB 880-54501/5-A
Matrix: Solid
Analysis Batch: 54618

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 54501

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		05/31/23 13:35	06/03/23 02:06	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		05/31/23 13:35	06/03/23 02:06	1
Toluene	<0.00200	U	0.00200		mg/Kg		05/31/23 13:35	06/03/23 02:06	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		05/31/23 13:35	06/03/23 02:06	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		05/31/23 13:35	06/03/23 02:06	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		05/31/23 13:35	06/03/23 02:06	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*65*	*S1-*	*70 - 130*	*05/31/23 13:35*	*06/03/23 02:06*	*1*
1,4-Difluorobenzene (Surr)	*87*		*70 - 130*	*05/31/23 13:35*	*06/03/23 02:06*	*1*

Lab Sample ID: LCS 880-54501/1-A
Matrix: Solid
Analysis Batch: 54618

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 54501

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene			0.100	0.1236		mg/Kg		124	70 - 130		
Ethylbenzene			0.100	0.09867		mg/Kg		99	70 - 130		
Toluene			0.100	0.1049		mg/Kg		105	70 - 130		
m-Xylene & p-Xylene			0.200	0.1913		mg/Kg		96	70 - 130		
o-Xylene			0.100	0.09239		mg/Kg		92	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*86*		*70 - 130*
1,4-Difluorobenzene (Surr)	*91*		*70 - 130*

Lab Sample ID: LCSD 880-54501/2-A
Matrix: Solid
Analysis Batch: 54618

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 54501

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene			0.100	0.1425	*+	mg/Kg		142	70 - 130	14	35

QC Sample Results

Client: Vertex
Project/Site: Corral Fly

Job ID: 890-4746-1
SDG: 23E-02502

Method: 8021B - Volatile Organic Compounds (GC) (Continued)

Lab Sample ID: LCSD 880-54501/2-A
Matrix: Solid
Analysis Batch: 54618

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 54501

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Ethylbenzene			0.100	0.1125		mg/Kg		113	70 - 130	13	35
Toluene			0.100	0.1167		mg/Kg		117	70 - 130	11	35
m-Xylene & p-Xylene			0.200	0.2190		mg/Kg		109	70 - 130	13	35
o-Xylene			0.100	0.1079		mg/Kg		108	70 - 130	15	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*86*		*70 - 130*
1,4-Difluorobenzene (Surr)	*106*		*70 - 130*

Lab Sample ID: 890-4740-A-21-D MS
Matrix: Solid
Analysis Batch: 54618

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 54501

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	<0.00200	U *+	0.0998	0.1168		mg/Kg		117	70 - 130
Ethylbenzene	<0.00200	U	0.0998	0.08918		mg/Kg		89	70 - 130
Toluene	<0.00200	U	0.0998	0.09584		mg/Kg		96	70 - 130
m-Xylene & p-Xylene	<0.00399	U	0.200	0.1714		mg/Kg		86	70 - 130
o-Xylene	<0.00200	U	0.0998	0.08463		mg/Kg		85	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*98*		*70 - 130*
1,4-Difluorobenzene (Surr)	*107*		*70 - 130*

Lab Sample ID: 890-4740-A-21-E MSD
Matrix: Solid
Analysis Batch: 54618

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 54501

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	<0.00200	U *+	0.101	0.1261		mg/Kg		125	70 - 130	8	35
Ethylbenzene	<0.00200	U	0.101	0.1006		mg/Kg		100	70 - 130	12	35
Toluene	<0.00200	U	0.101	0.1051		mg/Kg		104	70 - 130	9	35
m-Xylene & p-Xylene	<0.00399	U	0.202	0.1944		mg/Kg		96	70 - 130	13	35
o-Xylene	<0.00200	U	0.101	0.09651		mg/Kg		96	70 - 130	13	35

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*103*		*70 - 130*
1,4-Difluorobenzene (Surr)	*93*		*70 - 130*

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

Lab Sample ID: MB 880-54340/1-A
Matrix: Solid
Analysis Batch: 54334

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 54340

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		05/30/23 07:50	05/30/23 08:14	1

QC Sample Results

Client: Vertex
Project/Site: Corral Fly

Job ID: 890-4746-1
SDG: 23E-02502

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

Lab Sample ID: MB 880-54340/1-A
Matrix: Solid
Analysis Batch: 54334

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 54340

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		05/30/23 07:50	05/30/23 08:14	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		05/30/23 07:50	05/30/23 08:14	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*285*	*S1+*	*70 - 130*	*05/30/23 07:50*	*05/30/23 08:14*	*1*
o-Terphenyl	*256*	*S1+*	*70 - 130*	*05/30/23 07:50*	*05/30/23 08:14*	*1*

Lab Sample ID: LCS 880-54340/2-A
Matrix: Solid
Analysis Batch: 54334

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 54340

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics (GRO)-C6-C10	1000	1102		mg/Kg		110	70 - 130
Diesel Range Organics (Over C10-C28)	1000	740.7		mg/Kg		74	70 - 130

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1-Chlorooctane	*194*	*S1+*	*70 - 130*
o-Terphenyl	*182*	*S1+*	*70 - 130*

Lab Sample ID: LCSD 880-54340/3-A
Matrix: Solid
Analysis Batch: 54334

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 54340

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	1000	1295		mg/Kg		129	70 - 130	16	20
Diesel Range Organics (Over C10-C28)	1000	977.7	*1	mg/Kg		98	70 - 130	28	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1-Chlorooctane	*154*	*S1+*	*70 - 130*
o-Terphenyl	*142*	*S1+*	*70 - 130*

Lab Sample ID: 890-4746-1 MS
Matrix: Solid
Analysis Batch: 54334

Client Sample ID: BH23-01 0'
Prep Type: Total/NA
Prep Batch: 54340

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics (GRO)-C6-C10	<50.0	U F1 F2	998	2252	F1	mg/Kg		223	70 - 130
Diesel Range Organics (Over C10-C28)	65.5	F1 F2 *1	998	3131	F1	mg/Kg		307	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
1-Chlorooctane	*339*	*S1+*	*70 - 130*
o-Terphenyl	*258*	*S1+*	*70 - 130*

QC Sample Results

Client: Vertex
Project/Site: Corral Fly

Job ID: 890-4746-1
SDG: 23E-02502

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

Lab Sample ID: 890-4746-1 MSD
Matrix: Solid
Analysis Batch: 54334

Client Sample ID: BH23-01 0'
Prep Type: Total/NA
Prep Batch: 54340

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	<50.0	U F1 F2	999	1769	F1 F2	mg/Kg		175	70 - 130	24	20
Diesel Range Organics (Over C10-C28)	65.5	F1 F2 *1	999	2400	F1 F2	mg/Kg		234	70 - 130	26	20

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
1-Chlorooctane	*271*	*S1+*	*70 - 130*
o-Terphenyl	*206*	*S1+*	*70 - 130*

Lab Sample ID: MB 880-54430/1-A
Matrix: Solid
Analysis Batch: 54330

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 54430

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		05/30/23 16:10	05/30/23 17:37	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		05/30/23 16:10	05/30/23 17:37	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		05/30/23 16:10	05/30/23 17:37	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*118*		*70 - 130*	*05/30/23 16:10*	*05/30/23 17:37*	*1*
o-Terphenyl	*132*	*S1+*	*70 - 130*	*05/30/23 16:10*	*05/30/23 17:37*	*1*

Lab Sample ID: LCS 880-54430/2-A
Matrix: Solid
Analysis Batch: 54330

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 54430

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics (GRO)-C6-C10	1000	871.3		mg/Kg		87	70 - 130
Diesel Range Organics (Over C10-C28)	1000	764.2		mg/Kg		76	70 - 130

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1-Chlorooctane	*74*		*70 - 130*
o-Terphenyl	*83*		*70 - 130*

Lab Sample ID: LCSD 880-54430/3-A
Matrix: Solid
Analysis Batch: 54330

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 54430

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	1000	971.6		mg/Kg		97	70 - 130	11	20
Diesel Range Organics (Over C10-C28)	1000	840.7		mg/Kg		84	70 - 130	10	20

QC Sample Results

Client: Vertex
Project/Site: Corral Fly

Job ID: 890-4746-1
SDG: 23E-02502

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

Lab Sample ID: LCSD 880-54430/3-A
Matrix: Solid
Analysis Batch: 54330

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 54430

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
1-Chlorooctane	80		70 - 130
o-Terphenyl	90		70 - 130

Lab Sample ID: 890-4744-A-1-D MS
Matrix: Solid
Analysis Batch: 54330

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 54430

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	998	1117		mg/Kg		108	70 - 130
Diesel Range Organics (Over C10-C28)	500	F1	998	1081	F1	mg/Kg		58	70 - 130

Surrogate	MS %Recovery	MS Qualifier	Limits
1-Chlorooctane	115		70 - 130
o-Terphenyl	114		70 - 130

Lab Sample ID: 890-4744-A-1-E MSD
Matrix: Solid
Analysis Batch: 54330

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 54430

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	999	1153		mg/Kg		112	70 - 130	3	20
Diesel Range Organics (Over C10-C28)	500	F1	999	1101	F1	mg/Kg		60	70 - 130	2	20

Surrogate	MSD %Recovery	MSD Qualifier	Limits
1-Chlorooctane	118		70 - 130
o-Terphenyl	118		70 - 130

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-54418/1-A
Matrix: Solid
Analysis Batch: 54489

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			05/31/23 17:22	1

Lab Sample ID: LCS 880-54418/2-A
Matrix: Solid
Analysis Batch: 54489

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	250	263.7		mg/Kg		105	90 - 110

QC Sample Results

Client: Vertex
Project/Site: Corral Fly

Job ID: 890-4746-1
SDG: 23E-02502

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: LCSD 880-54418/3-A
Matrix: Solid
Analysis Batch: 54489

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	257.0		mg/Kg		103	90 - 110	3	20

Lab Sample ID: 890-4746-1 MS
Matrix: Solid
Analysis Batch: 54489

Client Sample ID: BH23-01 0'
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	564		1260	1926		mg/Kg		108	90 - 110

Lab Sample ID: 890-4746-1 MSD
Matrix: Solid
Analysis Batch: 54489

Client Sample ID: BH23-01 0'
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	564		1260	1893		mg/Kg		106	90 - 110	2	20

QC Association Summary

Client: Vertex
Project/Site: Corral Fly

Job ID: 890-4746-1
SDG: 23E-02502

GC VOA

Prep Batch: 54500

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-54500/5-A	Method Blank	Total/NA	Solid	5035	

Prep Batch: 54501

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4746-1	BH23-01 0'	Total/NA	Solid	5035	
890-4746-2	BH23-01 2'	Total/NA	Solid	5035	
890-4746-3	BH23-01 4'	Total/NA	Solid	5035	
890-4746-4	BH23-02 0'	Total/NA	Solid	5035	
890-4746-5	BH23-02 2'	Total/NA	Solid	5035	
890-4746-6	BH23-02 4'	Total/NA	Solid	5035	
890-4746-7	BH23-03 0'	Total/NA	Solid	5035	
890-4746-8	BH23-03 2'	Total/NA	Solid	5035	
890-4746-9	BH23-03 4'	Total/NA	Solid	5035	
MB 880-54501/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-54501/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-54501/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
890-4740-A-21-D MS	Matrix Spike	Total/NA	Solid	5035	
890-4740-A-21-E MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Analysis Batch: 54618

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4746-1	BH23-01 0'	Total/NA	Solid	8021B	54501
890-4746-2	BH23-01 2'	Total/NA	Solid	8021B	54501
890-4746-3	BH23-01 4'	Total/NA	Solid	8021B	54501
890-4746-4	BH23-02 0'	Total/NA	Solid	8021B	54501
890-4746-5	BH23-02 2'	Total/NA	Solid	8021B	54501
890-4746-6	BH23-02 4'	Total/NA	Solid	8021B	54501
890-4746-7	BH23-03 0'	Total/NA	Solid	8021B	54501
890-4746-8	BH23-03 2'	Total/NA	Solid	8021B	54501
890-4746-9	BH23-03 4'	Total/NA	Solid	8021B	54501
MB 880-54500/5-A	Method Blank	Total/NA	Solid	8021B	54500
MB 880-54501/5-A	Method Blank	Total/NA	Solid	8021B	54501
LCS 880-54501/1-A	Lab Control Sample	Total/NA	Solid	8021B	54501
LCSD 880-54501/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	54501
890-4740-A-21-D MS	Matrix Spike	Total/NA	Solid	8021B	54501
890-4740-A-21-E MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	54501

Analysis Batch: 54758

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4746-1	BH23-01 0'	Total/NA	Solid	Total BTEX	
890-4746-2	BH23-01 2'	Total/NA	Solid	Total BTEX	
890-4746-3	BH23-01 4'	Total/NA	Solid	Total BTEX	
890-4746-4	BH23-02 0'	Total/NA	Solid	Total BTEX	
890-4746-5	BH23-02 2'	Total/NA	Solid	Total BTEX	
890-4746-6	BH23-02 4'	Total/NA	Solid	Total BTEX	
890-4746-7	BH23-03 0'	Total/NA	Solid	Total BTEX	
890-4746-8	BH23-03 2'	Total/NA	Solid	Total BTEX	
890-4746-9	BH23-03 4'	Total/NA	Solid	Total BTEX	

QC Association Summary

Client: Vertex
Project/Site: Corral Fly

Job ID: 890-4746-1
SDG: 23E-02502

GC Semi VOA

Analysis Batch: 54330

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4746-9	BH23-03 4'	Total/NA	Solid	8015B NM	54430
MB 880-54430/1-A	Method Blank	Total/NA	Solid	8015B NM	54430
LCS 880-54430/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	54430
LCSD 880-54430/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	54430
890-4744-A-1-D MS	Matrix Spike	Total/NA	Solid	8015B NM	54430
890-4744-A-1-E MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	54430

Analysis Batch: 54334

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4746-1	BH23-01 0'	Total/NA	Solid	8015B NM	54340
890-4746-2	BH23-01 2'	Total/NA	Solid	8015B NM	54340
890-4746-3	BH23-01 4'	Total/NA	Solid	8015B NM	54340
890-4746-4	BH23-02 0'	Total/NA	Solid	8015B NM	54340
890-4746-5	BH23-02 2'	Total/NA	Solid	8015B NM	54340
890-4746-6	BH23-02 4'	Total/NA	Solid	8015B NM	54340
890-4746-7	BH23-03 0'	Total/NA	Solid	8015B NM	54340
890-4746-8	BH23-03 2'	Total/NA	Solid	8015B NM	54340
MB 880-54340/1-A	Method Blank	Total/NA	Solid	8015B NM	54340
LCS 880-54340/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	54340
LCSD 880-54340/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	54340
890-4746-1 MS	BH23-01 0'	Total/NA	Solid	8015B NM	54340
890-4746-1 MSD	BH23-01 0'	Total/NA	Solid	8015B NM	54340

Prep Batch: 54340

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4746-1	BH23-01 0'	Total/NA	Solid	8015NM Prep	
890-4746-2	BH23-01 2'	Total/NA	Solid	8015NM Prep	
890-4746-3	BH23-01 4'	Total/NA	Solid	8015NM Prep	
890-4746-4	BH23-02 0'	Total/NA	Solid	8015NM Prep	
890-4746-5	BH23-02 2'	Total/NA	Solid	8015NM Prep	
890-4746-6	BH23-02 4'	Total/NA	Solid	8015NM Prep	
890-4746-7	BH23-03 0'	Total/NA	Solid	8015NM Prep	
890-4746-8	BH23-03 2'	Total/NA	Solid	8015NM Prep	
MB 880-54340/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-54340/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-54340/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-4746-1 MS	BH23-01 0'	Total/NA	Solid	8015NM Prep	
890-4746-1 MSD	BH23-01 0'	Total/NA	Solid	8015NM Prep	

Prep Batch: 54430

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4746-9	BH23-03 4'	Total/NA	Solid	8015NM Prep	
MB 880-54430/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-54430/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-54430/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-4744-A-1-D MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
890-4744-A-1-E MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

Analysis Batch: 54455

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4746-1	BH23-01 0'	Total/NA	Solid	8015 NM	

QC Association Summary

Client: Vertex
Project/Site: Corral Fly

Job ID: 890-4746-1
SDG: 23E-02502

GC Semi VOA (Continued)

Analysis Batch: 54455 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4746-2	BH23-01 2'	Total/NA	Solid	8015 NM	
890-4746-3	BH23-01 4'	Total/NA	Solid	8015 NM	
890-4746-4	BH23-02 0'	Total/NA	Solid	8015 NM	
890-4746-5	BH23-02 2'	Total/NA	Solid	8015 NM	
890-4746-6	BH23-02 4'	Total/NA	Solid	8015 NM	
890-4746-7	BH23-03 0'	Total/NA	Solid	8015 NM	
890-4746-8	BH23-03 2'	Total/NA	Solid	8015 NM	
890-4746-9	BH23-03 4'	Total/NA	Solid	8015 NM	

HPLC/IC

Leach Batch: 54418

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4746-1	BH23-01 0'	Soluble	Solid	DI Leach	
890-4746-2	BH23-01 2'	Soluble	Solid	DI Leach	
890-4746-3	BH23-01 4'	Soluble	Solid	DI Leach	
890-4746-4	BH23-02 0'	Soluble	Solid	DI Leach	
890-4746-5	BH23-02 2'	Soluble	Solid	DI Leach	
890-4746-6	BH23-02 4'	Soluble	Solid	DI Leach	
890-4746-7	BH23-03 0'	Soluble	Solid	DI Leach	
890-4746-8	BH23-03 2'	Soluble	Solid	DI Leach	
890-4746-9	BH23-03 4'	Soluble	Solid	DI Leach	
MB 880-54418/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-54418/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-54418/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-4746-1 MS	BH23-01 0'	Soluble	Solid	DI Leach	
890-4746-1 MSD	BH23-01 0'	Soluble	Solid	DI Leach	

Analysis Batch: 54489

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4746-1	BH23-01 0'	Soluble	Solid	300.0	54418
890-4746-2	BH23-01 2'	Soluble	Solid	300.0	54418
890-4746-3	BH23-01 4'	Soluble	Solid	300.0	54418
890-4746-4	BH23-02 0'	Soluble	Solid	300.0	54418
890-4746-5	BH23-02 2'	Soluble	Solid	300.0	54418
890-4746-6	BH23-02 4'	Soluble	Solid	300.0	54418
890-4746-7	BH23-03 0'	Soluble	Solid	300.0	54418
890-4746-8	BH23-03 2'	Soluble	Solid	300.0	54418
890-4746-9	BH23-03 4'	Soluble	Solid	300.0	54418
MB 880-54418/1-A	Method Blank	Soluble	Solid	300.0	54418
LCS 880-54418/2-A	Lab Control Sample	Soluble	Solid	300.0	54418
LCSD 880-54418/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	54418
890-4746-1 MS	BH23-01 0'	Soluble	Solid	300.0	54418
890-4746-1 MSD	BH23-01 0'	Soluble	Solid	300.0	54418

Lab Chronicle

Client: Vertex
Project/Site: Corral Fly

Job ID: 890-4746-1
SDG: 23E-02502

Client Sample ID: BH23-01 0'

Lab Sample ID: 890-4746-1
Matrix: Solid
Date Collected: 05/25/23 10:00
Date Received: 05/26/23 08:15

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	54501	05/31/23 13:35	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	54618	06/03/23 05:40	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			54758	06/05/23 12:45	SM	EET MID
Total/NA	Analysis	8015 NM		1			54455	05/31/23 09:22	SM	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	54340	05/30/23 08:50	AM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	54334	05/30/23 11:39	SM	EET MID
Soluble	Leach	DI Leach			4.97 g	50 mL	54418	05/30/23 14:31	KS	EET MID
Soluble	Analysis	300.0		5	50 mL	50 mL	54489	05/31/23 17:38	CH	EET MID

Client Sample ID: BH23-01 2'

Lab Sample ID: 890-4746-2
Matrix: Solid
Date Collected: 05/25/23 10:05
Date Received: 05/26/23 08:15

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	54501	05/31/23 13:35	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	54618	06/03/23 06:07	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			54758	06/05/23 12:45	SM	EET MID
Total/NA	Analysis	8015 NM		1			54455	05/31/23 09:22	SM	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	54340	05/30/23 08:50	AM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	54334	05/30/23 12:53	SM	EET MID
Soluble	Leach	DI Leach			5.01 g	50 mL	54418	05/30/23 14:31	KS	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	54489	05/31/23 17:54	CH	EET MID

Client Sample ID: BH23-01 4'

Lab Sample ID: 890-4746-3
Matrix: Solid
Date Collected: 05/25/23 10:10
Date Received: 05/26/23 08:15

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	54501	05/31/23 13:35	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	54618	06/03/23 06:34	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			54758	06/05/23 12:45	SM	EET MID
Total/NA	Analysis	8015 NM		1			54455	05/31/23 09:22	SM	EET MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	54340	05/30/23 08:50	AM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	54334	05/30/23 13:15	SM	EET MID
Soluble	Leach	DI Leach			4.99 g	50 mL	54418	05/30/23 14:31	KS	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	54489	05/31/23 18:00	CH	EET MID

Client Sample ID: BH23-02 0'

Lab Sample ID: 890-4746-4
Matrix: Solid
Date Collected: 05/25/23 10:15
Date Received: 05/26/23 08:15

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	54501	05/31/23 13:35	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	54618	06/03/23 08:23	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			54758	06/05/23 12:45	SM	EET MID

Eurofins Carlsbad

Lab Chronicle

Client: Vertex
Project/Site: Corral Fly

Job ID: 890-4746-1
SDG: 23E-02502

Client Sample ID: BH23-02 0'

Lab Sample ID: 890-4746-4
Matrix: Solid
Date Collected: 05/25/23 10:15
Date Received: 05/26/23 08:15

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			54455	05/31/23 09:22	SM	EET MID
Total/NA	Prep	8015NM Prep			10.05 g	10 mL	54340	05/30/23 08:50	AM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	54334	05/30/23 13:36	SM	EET MID
Soluble	Leach	DI Leach			5.04 g	50 mL	54418	05/30/23 14:31	KS	EET MID
Soluble	Analysis	300.0		5	50 mL	50 mL	54489	05/31/23 18:05	CH	EET MID

Client Sample ID: BH23-02 2'

Lab Sample ID: 890-4746-5
Matrix: Solid
Date Collected: 05/25/23 10:20
Date Received: 05/26/23 08:15

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	54501	05/31/23 13:35	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	54618	06/03/23 08:50	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			54758	06/05/23 12:45	SM	EET MID
Total/NA	Analysis	8015 NM		1			54455	05/31/23 09:22	SM	EET MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	54340	05/30/23 08:50	AM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	54334	05/30/23 13:57	SM	EET MID
Soluble	Leach	DI Leach			5.02 g	50 mL	54418	05/30/23 14:31	KS	EET MID
Soluble	Analysis	300.0		5	50 mL	50 mL	54489	05/31/23 18:11	CH	EET MID

Client Sample ID: BH23-02 4'

Lab Sample ID: 890-4746-6
Matrix: Solid
Date Collected: 05/25/23 10:25
Date Received: 05/26/23 08:15

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	54501	05/31/23 13:35	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	54618	06/03/23 09:17	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			54758	06/05/23 12:45	SM	EET MID
Total/NA	Analysis	8015 NM		1			54455	05/31/23 09:22	SM	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	54340	05/30/23 08:50	AM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	54334	05/30/23 14:19	SM	EET MID
Soluble	Leach	DI Leach			5 g	50 mL	54418	05/30/23 14:31	KS	EET MID
Soluble	Analysis	300.0		5	50 mL	50 mL	54489	05/31/23 18:27	CH	EET MID

Client Sample ID: BH23-03 0'

Lab Sample ID: 890-4746-7
Matrix: Solid
Date Collected: 05/25/23 10:30
Date Received: 05/26/23 08:15

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	54501	05/31/23 13:35	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	54618	06/03/23 09:44	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			54758	06/05/23 12:45	SM	EET MID
Total/NA	Analysis	8015 NM		1			54455	05/31/23 09:22	SM	EET MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	54340	05/30/23 08:50	AM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	54334	05/30/23 14:40	SM	EET MID

Eurofins Carlsbad

Lab Chronicle

Client: Vertex
Project/Site: Corral Fly

Job ID: 890-4746-1
SDG: 23E-02502

Client Sample ID: BH23-03 0'

Lab Sample ID: 890-4746-7

Date Collected: 05/25/23 10:30
Matrix: Solid
Date Received: 05/26/23 08:15

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Soluble	Leach	DI Leach			5.02 g	50 mL	54418	05/30/23 14:31	KS	EET MID
Soluble	Analysis	300.0		5	50 mL	50 mL	54489	05/31/23 18:32	CH	EET MID

Client Sample ID: BH23-03 2'

Lab Sample ID: 890-4746-8

Date Collected: 05/25/23 10:35
Matrix: Solid
Date Received: 05/26/23 08:15

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	54501	05/31/23 13:35	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	54618	06/03/23 10:10	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			54758	06/05/23 12:45	SM	EET MID
Total/NA	Analysis	8015 NM		1			54455	05/31/23 09:22	SM	EET MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	54340	05/30/23 08:50	AM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	54334	05/30/23 15:01	SM	EET MID
Soluble	Leach	DI Leach			4.95 g	50 mL	54418	05/30/23 14:31	KS	EET MID
Soluble	Analysis	300.0		5	50 mL	50 mL	54489	05/31/23 18:38	CH	EET MID

Client Sample ID: BH23-03 4'

Lab Sample ID: 890-4746-9

Date Collected: 05/25/23 10:40
Matrix: Solid
Date Received: 05/26/23 08:15

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	54501	05/31/23 13:35	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	54618	06/03/23 10:37	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			54758	06/05/23 12:45	SM	EET MID
Total/NA	Analysis	8015 NM		1			54455	05/31/23 13:03	SM	EET MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	54430	05/30/23 16:10	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	54330	05/30/23 20:53	SM	EET MID
Soluble	Leach	DI Leach			5.03 g	50 mL	54418	05/30/23 14:31	KS	EET MID
Soluble	Analysis	300.0		5	50 mL	50 mL	54489	05/31/23 18:43	CH	EET MID

Laboratory References:

EET MID = Eurofins Midland, 1211 W. Florida Ave, Midland, TX 79701, TEL (432)704-5440

Accreditation/Certification Summary

Client: Vertex
Project/Site: Corral Fly

Job ID: 890-4746-1
SDG: 23E-02502

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	T104704400-22-25	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: Vertex
Project/Site: Corral Fly

Job ID: 890-4746-1
SDG: 23E-02502

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	EPA	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

EPA = US Environmental Protection Agency

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: Vertex
Project/Site: Corral Fly

Job ID: 890-4746-1
SDG: 23E-02502

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-4746-1	BH23-01 0'	Solid	05/25/23 10:00	05/26/23 08:15	0'
890-4746-2	BH23-01 2'	Solid	05/25/23 10:05	05/26/23 08:15	2'
890-4746-3	BH23-01 4'	Solid	05/25/23 10:10	05/26/23 08:15	4'
890-4746-4	BH23-02 0'	Solid	05/25/23 10:15	05/26/23 08:15	0'
890-4746-5	BH23-02 2'	Solid	05/25/23 10:20	05/26/23 08:15	2'
890-4746-6	BH23-02 4'	Solid	05/25/23 10:25	05/26/23 08:15	4'
890-4746-7	BH23-03 0'	Solid	05/25/23 10:30	05/26/23 08:15	0'
890-4746-8	BH23-03 2'	Solid	05/25/23 10:35	05/26/23 08:15	2'
890-4746-9	BH23-03 4'	Solid	05/25/23 10:40	05/26/23 08:15	

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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: _____

www.xenco.com Page 1 of 1

Project Manager:	Chance Dixon	Bill to: (if different)	Rob Kirk
Company Name:	Vertex	Company Name:	Solaris
Address:	On File	Address:	
City, State ZIP:		City, State ZIP:	
Phone:		Email:	cdixon@vertex.ca analytical@vertex.ca

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:	Corral Fly	Turn Around	☒ Routine ☐ Rush
Project Number:	23E-02502		
Project Location:		Due Date:	
Sampler's Name:	Hunter Klein	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:	IR#007
Cooler Custody Seals:	Yes No (N/A)	Correction Factor:	-0.2
Sample Custody Seals:	Yes No (N/A)	Temperature Reading:	1.0
Total Containers:		Corrected Temperature:	0.8

ANALYSIS REQUEST

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Grab/Comp	# of Cont	Pres. Code	TPH	BTEX	Cl
BH23-01 0'	Soil	5/25/23	10:00					X	X	X
BH23-01 2'			10:05					X	X	X
BH23-01 4'			10:10					X	X	X
BH23-02 0'			10:15					X	X	X
BH23-02 2'			10:20					X	X	X
BH23-02 4'			10:25					X	X	X
BH23-03 0'			10:30					X	X	X
BH23-03 2'			10:35					X	X	X

890-4746 Chain of Custody

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

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	Hunter Klein	Ace Cuy	5.26.23 815			
3				4		
5				6		

Revised Date: 08/25/2020 Rev. 2020.2

Received by OCD: 7/24/2024 3:24:20 PM
Released to Imaging: 7/26/2024 3:59:45 PM
6/5/2023
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Login Sample Receipt Checklist

Client: Vertex

Job Number: 890-4746-1
SDG Number: 23E-02502

Login Number: 4746
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	
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: Vertex

Job Number: 890-4746-1
SDG Number: 23E-02502

Login Number: 4746
List Number: 2
Creator: Rodriguez, Leticia

List Source: Eurofins Midland
List Creation: 05/30/23 08:27 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	

eurofins | Environment Testing

ANALYTICAL REPORT

PREPARED FOR

Attn: Chance Dixon
Vertex
3101 Boyd Dr
Carlsbad, New Mexico 88220

Generated 6/5/2023 2:33:35 PM

JOB DESCRIPTION

Corral Fly
SDG NUMBER 23E-02502

JOB NUMBER

890-4751-1

Eurofins Carlsbad
1089 N Canal St.
Carlsbad NM 88220

See page two for job notes and contact information.

Released to Imaging: 7/26/2024 3:39:45 PM

my EOL

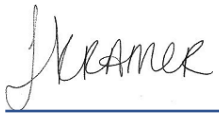
Eurofins Carlsbad

Job Notes

This report may not be reproduced except in full, and with written approval from the laboratory. The results relate only to the samples tested. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

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



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Authorized for release by
Jessica Kramer, Project Manager
Jessica.Kramer@et.eurofinsus.com
(432)704-5440

Client: Vertex
Project/Site: Corral Fly

Laboratory Job ID: 890-4751-1
SDG: 23E-02502

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Eurofins Carlsbad
6/5/2023

Definitions/Glossary

Client: Vertex Job ID: 890-4751-1
Project/Site: Corral Fly SDG: 23E-02502

Qualifiers

GC VOA

Qualifier	Qualifier Description
*+	LCS and/or LCSD is outside acceptance limits, high biased.
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.

GC Semi VOA

Qualifier	Qualifier Description
S1+	Surrogate recovery exceeds control limits, high 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: Vertex
Project/Site: Corral Fly

Job ID: 890-4751-1
SDG: 23E-02502

Job ID: 890-4751-1

Laboratory: Eurofins Carlsbad

Narrative

Job Narrative
890-4751-1

Receipt
The samples were received on 5/26/2023 4:20 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 7.0°C

Receipt Exceptions
The following samples were received and analyzed from an unpreserved bulk soil jar: BH23-04 0' (890-4751-1), BH23-04 2' (890-4751-2), BH23-05 0' (890-4751-3), BH23-05 2' (890-4751-4), BH23-05 4' (890-4751-5), BH23-06 0' (890-4751-6) and BH23-06 2' (890-4751-7).

GC VOA
Method 8021B: Surrogate recovery for the following sample was outside control limits: (MB 880-54490/5-A). Evidence of matrix interferences is not obvious.

Method 8021B: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 880-54490 and analytical batch 880-54541 were outside control limits for one or more analytes. See QC Sample Results for detail. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery is within acceptance limits.

Method 8021B: The continuing calibration verification (CCV) associated with batch 880-54541 recovered below the control limits for m-Xylene & p-Xylene and o-Xylene. An acceptable CCV was ran within the 12 hour window, therefore the data has been qualified and reported. The associated sample is impacted: (CCV 880-54541/20).

Method 8021B: Surrogate recovery for the following sample was outside control limits: (MB 880-54491/5-A). Evidence of matrix interferences is not obvious.

Method 8021B: Surrogate recovery for the following sample was outside control limits: (MB 880-54495/5-A). Evidence of matrix interferences is not obvious.

Method 8021B: The continuing calibration verification (CCV) associated with batch 880-54492 recovered above the upper control limit for Benzene. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. The associated sample is impacted: (CCV 880-54492/51).

Method 8021B: The laboratory control sample (LCS) associated with preparation batch 880-54495 and analytical batch 880-54492 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.

Method 8021B: The continuing calibration verification (CCV) associated with batch 880-54618 recovered above the upper control limit for Benzene. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. The associated samples are impacted: (CCV 880-54618/2) and (CCV 880-54618/20).

Method 8021B: The surrogate recovery for the blank associated with preparation batch 880-54500 and analytical batch 880-54618 was outside the control limits.

Method 8021B: The laboratory control sample (LCS) and / or laboratory control sample duplicate (LCSD) for preparation batch 880-54500 and analytical batch 880-54618 recovered outside control limits for the following analytes: Benzene. These analytes were biased high in the LCS and were not detected in the associated samples; therefore, the data have been reported.

Method 8021B: The matrix spike (MS) recovery for preparation batch 880-54500 and analytical batch 880-54618 was outside control limits for the following analyte(s): Benzene. Samples are non detect therefore the data has been qualified and reported.

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

Case Narrative

Client: Vertex
Project/Site: Corral Fly

Job ID: 890-4751-1
SDG: 23E-02502

Job ID: 890-4751-1 (Continued)

Laboratory: Eurofins Carlsbad (Continued)

GC Semi VOA

Method 8015MOD_NM: The surrogate recovery for the blank associated with preparation batch 880-54453 and analytical batch 880-54532 was outside the upper control limits.

Method 8015MOD_NM: Surrogate recovery for the following samples were outside control limits: BH23-04 0' (890-4751-1), (880-28880-A-9-A), (880-28880-A-9-B MS) and (880-28880-A-9-C MSD). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8015MOD_NM: Surrogate recovery for the following samples were outside control limits: BH23-04 2' (890-4751-2), BH23-05 0' (890-4751-3), BH23-05 2' (890-4751-4), BH23-05 4' (890-4751-5), BH23-06 0' (890-4751-6) and BH23-06 2' (890-4751-7). 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.

HPLC/IC

Method 300_ORGFM_28D: The matrix spike / matrix spike duplicate (MS/MSD) recoveries and precision for preparation batch 880-54461 and analytical batch 880-54527 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample / laboratory sample control duplicate (LCS/LCSD) precision was within acceptance limits.

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

Client Sample Results

Client: Vertex
Project/Site: Corral Fly

Job ID: 890-4751-1
SDG: 23E-02502

Client Sample ID: BH23-04 0'

Lab Sample ID: 890-4751-1
Matrix: Solid
Date Collected: 05/26/23 10:00
Date Received: 05/26/23 16:20
Sample Depth: 0

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00198	U	0.00198		mg/Kg		05/31/23 12:00	06/01/23 19:42	1
Ethylbenzene	<0.00198	U	0.00198		mg/Kg		05/31/23 12:00	06/01/23 19:42	1
Toluene	<0.00198	U	0.00198		mg/Kg		05/31/23 12:00	06/01/23 19:42	1
Xylenes, Total	<0.00397	U	0.00397		mg/Kg		05/31/23 12:00	06/01/23 19:42	1
m-Xylene & p-Xylene	<0.00397	U	0.00397		mg/Kg		05/31/23 12:00	06/01/23 19:42	1
o-Xylene	<0.00198	U	0.00198		mg/Kg		05/31/23 12:00	06/01/23 19:42	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*72*		*70 - 130*	*05/31/23 12:00*	*06/01/23 19:42*	*1*
1,4-Difluorobenzene (Surr)	*95*		*70 - 130*	*05/31/23 12:00*	*06/01/23 19:42*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00397	U	0.00397		mg/Kg			06/02/23 17:30	1

Method: SW846 8015 NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**72.6**		49.9		mg/Kg			06/02/23 09:38	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		05/31/23 09:15	06/01/23 15:19	1
Diesel Range Organics (Over C10-C28)	**72.6**		49.9		mg/Kg		05/31/23 09:15	06/01/23 15:19	1
OII Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		05/31/23 09:15	06/01/23 15:19	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*150*	*S1+*	*70 - 130*	*05/31/23 09:15*	*06/01/23 15:19*	*1*
o-Terphenyl	*116*		*70 - 130*	*05/31/23 09:15*	*06/01/23 15:19*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**219**		4.95		mg/Kg			05/31/23 22:10	1

Client Sample ID: BH23-04 2'

Lab Sample ID: 890-4751-2
Matrix: Solid
Date Collected: 05/26/23 10:05
Date Received: 05/26/23 16:20
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		05/31/23 12:00	06/01/23 20:02	1
Ethylbenzene	<0.00201	U	0.00201		mg/Kg		05/31/23 12:00	06/01/23 20:02	1
Toluene	<0.00201	U	0.00201		mg/Kg		05/31/23 12:00	06/01/23 20:02	1
Xylenes, Total	<0.00402	U	0.00402		mg/Kg		05/31/23 12:00	06/01/23 20:02	1
m-Xylene & p-Xylene	<0.00402	U	0.00402		mg/Kg		05/31/23 12:00	06/01/23 20:02	1
o-Xylene	<0.00201	U	0.00201		mg/Kg		05/31/23 12:00	06/01/23 20:02	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*71*		*70 - 130*	*05/31/23 12:00*	*06/01/23 20:02*	*1*

Client Sample Results

Client: Vertex
Project/Site: Corral Fly

Job ID: 890-4751-1
SDG: 23E-02502

Client Sample ID: BH23-04 2'

Lab Sample ID: 890-4751-2
Matrix: Solid
Date Collected: 05/26/23 10:05
Date Received: 05/26/23 16:20
Sample Depth: 2

Method: SW846 8021B - Volatile Organic Compounds (GC) (Continued)

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Difluorobenzene (Surr)	*93*		*70 - 130*	*05/31/23 12:00*	*06/01/23 20:02*	*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			06/02/23 17:30	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			06/02/23 09:38	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		05/31/23 09:15	06/01/23 16:27	1
Diesel Range Organics (Over C10-C28)	<49.8	U	49.8		mg/Kg		05/31/23 09:15	06/01/23 16:27	1
OII Range Organics (Over C28-C36)	<49.8	U	49.8		mg/Kg		05/31/23 09:15	06/01/23 16:27	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*154*	*S1+*	*70 - 130*	*05/31/23 09:15*	*06/01/23 16:27*	*1*
o-Terphenyl	*120*		*70 - 130*	*05/31/23 09:15*	*06/01/23 16:27*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**179**		4.98		mg/Kg			05/31/23 22:15	1

Client Sample ID: BH23-05 0'

Lab Sample ID: 890-4751-3
Matrix: Solid
Date Collected: 05/26/23 10:10
Date Received: 05/26/23 16:20
Sample Depth: 0

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		05/31/23 12:00	06/01/23 20:22	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		05/31/23 12:00	06/01/23 20:22	1
Toluene	<0.00200	U	0.00200		mg/Kg		05/31/23 12:00	06/01/23 20:22	1
Xylenes, Total	<0.00401	U	0.00401		mg/Kg		05/31/23 12:00	06/01/23 20:22	1
m-Xylene & p-Xylene	<0.00401	U	0.00401		mg/Kg		05/31/23 12:00	06/01/23 20:22	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		05/31/23 12:00	06/01/23 20:22	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*72*		*70 - 130*	*05/31/23 12:00*	*06/01/23 20:22*	*1*
1,4-Difluorobenzene (Surr)	*94*		*70 - 130*	*05/31/23 12:00*	*06/01/23 20:22*	*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			06/02/23 17:30	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			06/02/23 09:38	1

Eurofins Carlsbad

Client Sample Results

Client: Vertex
Project/Site: Corral Fly

Job ID: 890-4751-1
SDG: 23E-02502

Client Sample ID: BH23-05 0'

Lab Sample ID: 890-4751-3
Matrix: Solid
Date Collected: 05/26/23 10:10
Date Received: 05/26/23 16:20
Sample Depth: 0

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		05/31/23 09:15	06/01/23 17:15	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		05/31/23 09:15	06/01/23 17:15	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		05/31/23 09:15	06/01/23 17:15	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*141*	*S1+*	*70 - 130*	*05/31/23 09:15*	*06/01/23 17:15*	*1*
o-Terphenyl	*111*		*70 - 130*	*05/31/23 09:15*	*06/01/23 17:15*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**749**		4.95		mg/Kg			05/31/23 22:31	1

Client Sample ID: BH23-05 2'

Lab Sample ID: 890-4751-4
Matrix: Solid
Date Collected: 05/26/23 10:15
Date Received: 05/26/23 16:20
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		05/31/23 12:00	06/01/23 20:43	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		05/31/23 12:00	06/01/23 20:43	1
Toluene	<0.00199	U	0.00199		mg/Kg		05/31/23 12:00	06/01/23 20:43	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		05/31/23 12:00	06/01/23 20:43	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		05/31/23 12:00	06/01/23 20:43	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		05/31/23 12:00	06/01/23 20:43	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*75*		*70 - 130*	*05/31/23 12:00*	*06/01/23 20:43*	*1*
1,4-Difluorobenzene (Surr)	*97*		*70 - 130*	*05/31/23 12:00*	*06/01/23 20:43*	*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			06/02/23 17:30	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			06/02/23 09:38	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		05/31/23 09:15	06/01/23 17:36	1
Diesel Range Organics (Over C10-C28)	<49.8	U	49.8		mg/Kg		05/31/23 09:15	06/01/23 17:36	1
OII Range Organics (Over C28-C36)	<49.8	U	49.8		mg/Kg		05/31/23 09:15	06/01/23 17:36	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*142*	*S1+*	*70 - 130*	*05/31/23 09:15*	*06/01/23 17:36*	*1*
o-Terphenyl	*111*		*70 - 130*	*05/31/23 09:15*	*06/01/23 17:36*	*1*

Client Sample Results

Client: Vertex
Project/Site: Corral Fly

Job ID: 890-4751-1
SDG: 23E-02502

Client Sample ID: BH23-05 2'

Lab Sample ID: 890-4751-4
Matrix: Solid
Date Collected: 05/26/23 10:15
Date Received: 05/26/23 16:20
Sample Depth: 2

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	1060		4.97		mg/Kg			05/31/23 22:37	1

Client Sample ID: BH23-05 4'

Lab Sample ID: 890-4751-5
Matrix: Solid
Date Collected: 05/26/23 10:20
Date Received: 05/26/23 16:20
Sample Depth: 4

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		05/31/23 12:00	06/01/23 21:03	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		05/31/23 12:00	06/01/23 21:03	1
Toluene	<0.00199	U	0.00199		mg/Kg		05/31/23 12:00	06/01/23 21:03	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		05/31/23 12:00	06/01/23 21:03	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		05/31/23 12:00	06/01/23 21:03	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		05/31/23 12:00	06/01/23 21:03	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*95*		*70 - 130*	*05/31/23 12:00*	*06/01/23 21:03*	*1*
1,4-Difluorobenzene (Surr)	*83*		*70 - 130*	*05/31/23 12:00*	*06/01/23 21:03*	*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			06/02/23 17:30	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			06/02/23 09:38	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		05/31/23 09:15	06/01/23 17:58	1
Diesel Range Organics (Over C10-C28)	<49.8	U	49.8		mg/Kg		05/31/23 09:15	06/01/23 17:58	1
OII Range Organics (Over C28-C36)	<49.8	U	49.8		mg/Kg		05/31/23 09:15	06/01/23 17:58	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*147*	*S1+*	*70 - 130*	*05/31/23 09:15*	*06/01/23 17:58*	*1*
o-Terphenyl	*114*		*70 - 130*	*05/31/23 09:15*	*06/01/23 17:58*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	359		5.04		mg/Kg			05/31/23 22:42	1

Client Sample Results

Client: Vertex
Project/Site: Corral Fly

Job ID: 890-4751-1
SDG: 23E-02502

Client Sample ID: BH23-06 0'

Lab Sample ID: 890-4751-6
Matrix: Solid
Date Collected: 05/26/23 10:25
Date Received: 05/26/23 16:20
Sample Depth: 0

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		05/31/23 13:23	06/02/23 22:31	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		05/31/23 13:23	06/02/23 22:31	1
Toluene	<0.00199	U	0.00199		mg/Kg		05/31/23 13:23	06/02/23 22:31	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		05/31/23 13:23	06/02/23 22:31	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		05/31/23 13:23	06/02/23 22:31	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		05/31/23 13:23	06/02/23 22:31	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*114*		*70 - 130*	*05/31/23 13:23*	*06/02/23 22:31*	*1*
1,4-Difluorobenzene (Surr)	*100*		*70 - 130*	*05/31/23 13:23*	*06/02/23 22:31*	*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			06/05/23 12:45	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			06/02/23 09:38	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		05/31/23 09:15	06/01/23 18:20	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		05/31/23 09:15	06/01/23 18:20	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		05/31/23 09:15	06/01/23 18:20	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*143*	*S1+*	*70 - 130*	*05/31/23 09:15*	*06/01/23 18:20*	*1*
o-Terphenyl	*112*		*70 - 130*	*05/31/23 09:15*	*06/01/23 18:20*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**183**		4.97		mg/Kg			05/31/23 22:47	1

Client Sample ID: BH23-06 2'

Lab Sample ID: 890-4751-7
Matrix: Solid
Date Collected: 05/26/23 10:30
Date Received: 05/26/23 16:20
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		05/31/23 12:12	06/02/23 05:47	1
Ethylbenzene	<0.00201	U	0.00201		mg/Kg		05/31/23 12:12	06/02/23 05:47	1
Toluene	<0.00201	U	0.00201		mg/Kg		05/31/23 12:12	06/02/23 05:47	1
Xylenes, Total	<0.00402	U	0.00402		mg/Kg		05/31/23 12:12	06/02/23 05:47	1
m-Xylene & p-Xylene	<0.00402	U	0.00402		mg/Kg		05/31/23 12:12	06/02/23 05:47	1
o-Xylene	<0.00201	U	0.00201		mg/Kg		05/31/23 12:12	06/02/23 05:47	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*116*		*70 - 130*	*05/31/23 12:12*	*06/02/23 05:47*	*1*

Client Sample Results

Client: Vertex
Project/Site: Corral Fly

Job ID: 890-4751-1
SDG: 23E-02502

Client Sample ID: BH23-06 2'

Date Collected: 05/26/23 10:30
Date Received: 05/26/23 16:20
Sample Depth: 2

Lab Sample ID: 890-4751-7

Matrix: Solid

Method: SW846 8021B - Volatile Organic Compounds (GC) (Continued)

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Difluorobenzene (Surr)	*101*		*70 - 130*	*05/31/23 12:12*	*06/02/23 05:47*	*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			06/02/23 17:49	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			06/02/23 09:38	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		05/31/23 09:15	06/01/23 18:41	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		05/31/23 09:15	06/01/23 18:41	1
OII Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		05/31/23 09:15	06/01/23 18:41	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*145*	*S1+*	*70 - 130*	*05/31/23 09:15*	*06/01/23 18:41*	*1*
o-Terphenyl	*113*		*70 - 130*	*05/31/23 09:15*	*06/01/23 18:41*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**176**		4.99		mg/Kg			05/31/23 22:53	1

Surrogate Summary

Client: Vertex
Project/Site: Corral Fly

Job ID: 890-4751-1
SDG: 23E-02502

Method: 8021B - Volatile Organic Compounds (GC)

Matrix: Solid **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)	
		BFB1	DFBZ1
Lab Sample ID	Client Sample ID	(70-130)	(70-130)
880-28831-A-21-G MS	Matrix Spike	89	106
880-28831-A-21-H MSD	Matrix Spike Duplicate	101	104
880-28928-A-2-D MS	Matrix Spike	88	117
880-28928-A-2-E MSD	Matrix Spike Duplicate	90	113
890-4737-A-4-D MS	Matrix Spike	98	106
890-4737-A-4-E MSD	Matrix Spike Duplicate	97	105
890-4751-1	BH23-04 0'	72	95
890-4751-2	BH23-04 2'	71	93
890-4751-3	BH23-05 0'	72	94
890-4751-4	BH23-05 2'	75	97
890-4751-5	BH23-05 4'	95	83
890-4751-6	BH23-06 0'	114	100
890-4751-7	BH23-06 2'	116	101
LCS 880-54490/1-A	Lab Control Sample	114	110
LCS 880-54495/1-A	Lab Control Sample	102	96
LCS 880-54500/1-A	Lab Control Sample	95	103
LCSD 880-54490/2-A	Lab Control Sample Dup	112	111
LCSD 880-54495/2-A	Lab Control Sample Dup	90	107
LCSD 880-54500/2-A	Lab Control Sample Dup	97	110
MB 880-54490/5-A	Method Blank	67 S1-	87
MB 880-54491/5-A	Method Blank	60 S1-	95
MB 880-54495/5-A	Method Blank	60 S1-	92
MB 880-54500/5-A	Method Blank	67 S1-	93

Surrogate Legend

BFB = 4-Bromofluorobenzene (Surr)
DFBZ = 1,4-Difluorobenzene (Surr)

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

Matrix: Solid **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)	
		1CO1	OTPH1
Lab Sample ID	Client Sample ID	(70-130)	(70-130)
880-28880-A-9-B MS	Matrix Spike	146 S1+	105
880-28880-A-9-C MSD	Matrix Spike Duplicate	146 S1+	105
890-4751-1	BH23-04 0'	150 S1+	116
890-4751-2	BH23-04 2'	154 S1+	120
890-4751-3	BH23-05 0'	141 S1+	111
890-4751-4	BH23-05 2'	142 S1+	111
890-4751-5	BH23-05 4'	147 S1+	114
890-4751-6	BH23-06 0'	143 S1+	112
890-4751-7	BH23-06 2'	145 S1+	113
LCS 880-54453/2-A	Lab Control Sample	107	84
LCSD 880-54453/3-A	Lab Control Sample Dup	122	93
MB 880-54453/1-A	Method Blank	170 S1+	133 S1+

Surrogate Legend

1CO = 1-Chlorooctane
OTPH = o-Terphenyl

QC Sample Results

Client: Vertex
Project/Site: Corral Fly

Job ID: 890-4751-1
SDG: 23E-02502

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-54490/5-A
Matrix: Solid
Analysis Batch: 54541

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 54490

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		05/31/23 11:15	06/01/23 11:05	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		05/31/23 11:15	06/01/23 11:05	1
Toluene	<0.00200	U	0.00200		mg/Kg		05/31/23 11:15	06/01/23 11:05	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		05/31/23 11:15	06/01/23 11:05	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		05/31/23 11:15	06/01/23 11:05	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		05/31/23 11:15	06/01/23 11:05	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*67*	*S1-*	*70 - 130*	*05/31/23 11:15*	*06/01/23 11:05*	*1*
1,4-Difluorobenzene (Surr)	*87*		*70 - 130*	*05/31/23 11:15*	*06/01/23 11:05*	*1*

Lab Sample ID: LCS 880-54490/1-A
Matrix: Solid
Analysis Batch: 54541

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 54490

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	0.100	0.1292		mg/Kg		129	70 - 130
Ethylbenzene	0.100	0.1163		mg/Kg		116	70 - 130
Toluene	0.100	0.1121		mg/Kg		112	70 - 130
m-Xylene & p-Xylene	0.200	0.2433		mg/Kg		122	70 - 130
o-Xylene	0.100	0.1220		mg/Kg		122	70 - 130

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*114*		*70 - 130*
1,4-Difluorobenzene (Surr)	*110*		*70 - 130*

Lab Sample ID: LCSD 880-54490/2-A
Matrix: Solid
Analysis Batch: 54541

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 54490

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	0.100	0.1265		mg/Kg		126	70 - 130	2	35
Ethylbenzene	0.100	0.1130		mg/Kg		113	70 - 130	3	35
Toluene	0.100	0.1145		mg/Kg		114	70 - 130	2	35
m-Xylene & p-Xylene	0.200	0.2347		mg/Kg		117	70 - 130	4	35
o-Xylene	0.100	0.1166		mg/Kg		117	70 - 130	5	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*112*		*70 - 130*
1,4-Difluorobenzene (Surr)	*111*		*70 - 130*

Lab Sample ID: 880-28928-A-2-D MS
Matrix: Solid
Analysis Batch: 54541

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 54490

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	<0.00200	U	0.0998	0.1054		mg/Kg		106	70 - 130
Ethylbenzene	<0.00200	U F1	0.0998	0.06403	F1	mg/Kg		64	70 - 130

QC Sample Results

Client: Vertex
Project/Site: Corral Fly

Job ID: 890-4751-1
SDG: 23E-02502

Method: 8021B - Volatile Organic Compounds (GC) (Continued)

Lab Sample ID: 880-28928-A-2-D MS — **Client Sample ID: Matrix Spike**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 54541 — **Prep Batch: 54490**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Toluene	<0.00200	U	0.0998	0.07364		mg/Kg		74	70 - 130
m-Xylene & p-Xylene	<0.00399	U F1	0.200	0.1220	F1	mg/Kg		61	70 - 130
o-Xylene	<0.00200	U F1	0.0998	0.06080	F1	mg/Kg		61	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*88*		*70 - 130*
1,4-Difluorobenzene (Surr)	*117*		*70 - 130*

Lab Sample ID: 880-28928-A-2-E MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 54541 — **Prep Batch: 54490**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	<0.00200	U	0.100	0.1029		mg/Kg		103	70 - 130	2	35
Ethylbenzene	<0.00200	U F1	0.100	0.06396	F1	mg/Kg		64	70 - 130	0	35
Toluene	<0.00200	U	0.100	0.07325		mg/Kg		73	70 - 130	1	35
m-Xylene & p-Xylene	<0.00399	U F1	0.200	0.1224	F1	mg/Kg		61	70 - 130	0	35
o-Xylene	<0.00200	U F1	0.100	0.06148	F1	mg/Kg		61	70 - 130	1	35

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*90*		*70 - 130*
1,4-Difluorobenzene (Surr)	*113*		*70 - 130*

Lab Sample ID: MB 880-54491/5-A — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 54492 — **Prep Batch: 54491**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		05/31/23 11:44	06/01/23 05:39	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		05/31/23 11:44	06/01/23 05:39	1
Toluene	<0.00200	U	0.00200		mg/Kg		05/31/23 11:44	06/01/23 05:39	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		05/31/23 11:44	06/01/23 05:39	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		05/31/23 11:44	06/01/23 05:39	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		05/31/23 11:44	06/01/23 05:39	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*60*	*S1-*	*70 - 130*	*05/31/23 11:44*	*06/01/23 05:39*	*1*
1,4-Difluorobenzene (Surr)	*95*		*70 - 130*	*05/31/23 11:44*	*06/01/23 05:39*	*1*

Lab Sample ID: MB 880-54495/5-A — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 54492 — **Prep Batch: 54495**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		05/31/23 12:12	06/01/23 19:36	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		05/31/23 12:12	06/01/23 19:36	1
Toluene	<0.00200	U	0.00200		mg/Kg		05/31/23 12:12	06/01/23 19:36	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		05/31/23 12:12	06/01/23 19:36	1

QC Sample Results

Client: Vertex
Project/Site: Corral Fly

Job ID: 890-4751-1
SDG: 23E-02502

Method: 8021B - Volatile Organic Compounds (GC) (Continued)

Lab Sample ID: MB 880-54495/5-A
Matrix: Solid
Analysis Batch: 54492

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 54495

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		05/31/23 12:12	06/01/23 19:36	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		05/31/23 12:12	06/01/23 19:36	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*60*	*S1-*	*70 - 130*	*05/31/23 12:12*	*06/01/23 19:36*	*1*
1,4-Difluorobenzene (Surr)	*92*		*70 - 130*	*05/31/23 12:12*	*06/01/23 19:36*	*1*

Lab Sample ID: LCS 880-54495/1-A
Matrix: Solid
Analysis Batch: 54492

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 54495

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene			0.100	0.1453	*+	mg/Kg		145	70 - 130		
Ethylbenzene			0.100	0.1263		mg/Kg		126	70 - 130		
Toluene			0.100	0.1295		mg/Kg		129	70 - 130		
m-Xylene & p-Xylene			0.200	0.2462		mg/Kg		123	70 - 130		
o-Xylene			0.100	0.1188		mg/Kg		119	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*102*		*70 - 130*
1,4-Difluorobenzene (Surr)	*96*		*70 - 130*

Lab Sample ID: LCSD 880-54495/2-A
Matrix: Solid
Analysis Batch: 54492

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 54495

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene			0.100	0.1314	*+	mg/Kg		131	70 - 130	10	35
Ethylbenzene			0.100	0.1123		mg/Kg		112	70 - 130	12	35
Toluene			0.100	0.1179		mg/Kg		118	70 - 130	9	35
m-Xylene & p-Xylene			0.200	0.2203		mg/Kg		110	70 - 130	11	35
o-Xylene			0.100	0.1053		mg/Kg		105	70 - 130	12	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*90*		*70 - 130*
1,4-Difluorobenzene (Surr)	*107*		*70 - 130*

Lab Sample ID: 880-28831-A-21-G MS
Matrix: Solid
Analysis Batch: 54492

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 54495

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene	<0.00199	U *+	0.100	0.1164		mg/Kg		116	70 - 130		
Ethylbenzene	<0.00199	U	0.100	0.09649		mg/Kg		96	70 - 130		
Toluene	<0.00199	U	0.100	0.1029		mg/Kg		102	70 - 130		
m-Xylene & p-Xylene	<0.00398	U	0.201	0.1882		mg/Kg		94	70 - 130		
o-Xylene	<0.00199	U	0.100	0.09197		mg/Kg		92	70 - 130		

QC Sample Results

Client: Vertex
Project/Site: Corral Fly

Job ID: 890-4751-1
SDG: 23E-02502

Method: 8021B - Volatile Organic Compounds (GC) (Continued)

Lab Sample ID: 880-28831-A-21-G MS
Matrix: Solid
Analysis Batch: 54492

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 54495

Surrogate	MS %Recovery	MS Qualifier	Limits
4-Bromofluorobenzene (Surr)	89		70 - 130
1,4-Difluorobenzene (Surr)	106		70 - 130

Lab Sample ID: 880-28831-A-21-H MSD
Matrix: Solid
Analysis Batch: 54492

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 54495

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	<0.00199	U *+	0.0990	0.1178		mg/Kg		119	70 - 130	1	35
Ethylbenzene	<0.00199	U	0.0990	0.09586		mg/Kg		97	70 - 130	1	35
Toluene	<0.00199	U	0.0990	0.1012		mg/Kg		102	70 - 130	2	35
m-Xylene & p-Xylene	<0.00398	U	0.198	0.1852		mg/Kg		94	70 - 130	2	35
o-Xylene	<0.00199	U	0.0990	0.09073		mg/Kg		92	70 - 130	1	35

Surrogate	MSD %Recovery	MSD Qualifier	Limits
4-Bromofluorobenzene (Surr)	101		70 - 130
1,4-Difluorobenzene (Surr)	104		70 - 130

Lab Sample ID: MB 880-54500/5-A
Matrix: Solid
Analysis Batch: 54618

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 54500

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		05/31/23 13:23	06/02/23 12:21	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		05/31/23 13:23	06/02/23 12:21	1
Toluene	<0.00200	U	0.00200		mg/Kg		05/31/23 13:23	06/02/23 12:21	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		05/31/23 13:23	06/02/23 12:21	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		05/31/23 13:23	06/02/23 12:21	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		05/31/23 13:23	06/02/23 12:21	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	67	S1-	70 - 130	05/31/23 13:23	06/02/23 12:21	1
1,4-Difluorobenzene (Surr)	93		70 - 130	05/31/23 13:23	06/02/23 12:21	1

Lab Sample ID: LCS 880-54500/1-A
Matrix: Solid
Analysis Batch: 54618

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 54500

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	0.100	0.1493	*+	mg/Kg		149	70 - 130
Ethylbenzene	0.100	0.1114		mg/Kg		111	70 - 130
Toluene	0.100	0.1264		mg/Kg		126	70 - 130
m-Xylene & p-Xylene	0.200	0.2259		mg/Kg		113	70 - 130
o-Xylene	0.100	0.1135		mg/Kg		113	70 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene (Surr)	95		70 - 130

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QC Sample Results

Client: Vertex
Project/Site: Corral Fly

Job ID: 890-4751-1
SDG: 23E-02502

Method: 8021B - Volatile Organic Compounds (GC) (Continued)

Lab Sample ID: LCS 880-54500/1-A
Matrix: Solid
Analysis Batch: 54618

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 54500

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1,4-Difluorobenzene (Surr)	*103*		*70 - 130*

Lab Sample ID: LCSD 880-54500/2-A
Matrix: Solid
Analysis Batch: 54618

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 54500

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene			0.100	0.1559	*+	mg/Kg		156	70 - 130	4	35
Ethylbenzene			0.100	0.1233		mg/Kg		123	70 - 130	10	35
Toluene			0.100	0.1270		mg/Kg		127	70 - 130	0	35
m-Xylene & p-Xylene			0.200	0.2419		mg/Kg		121	70 - 130	7	35
o-Xylene			0.100	0.1164		mg/Kg		116	70 - 130	3	35

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
4-Bromofluorobenzene (Surr)	*97*		*70 - 130*
1,4-Difluorobenzene (Surr)	*110*		*70 - 130*

Lab Sample ID: 890-4737-A-4-D MS
Matrix: Solid
Analysis Batch: 54618

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 54500

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene	<0.00202	U *+ F1	0.100	0.1386	F1	mg/Kg		138	70 - 130		
Ethylbenzene	<0.00202	U	0.100	0.09874		mg/Kg		98	70 - 130		
Toluene	<0.00202	U	0.100	0.1091		mg/Kg		109	70 - 130		
m-Xylene & p-Xylene	<0.00403	U	0.201	0.1891		mg/Kg		94	70 - 130		
o-Xylene	<0.00202	U	0.100	0.09094		mg/Kg		91	70 - 130		

Surrogate	MS %Recovery	MS Qualifier	Limits
4-Bromofluorobenzene (Surr)	*98*		*70 - 130*
1,4-Difluorobenzene (Surr)	*106*		*70 - 130*

Lab Sample ID: 890-4737-A-4-E MSD
Matrix: Solid
Analysis Batch: 54618

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 54500

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	<0.00202	U *+ F1	0.0996	0.1232		mg/Kg		124	70 - 130	12	35
Ethylbenzene	<0.00202	U	0.0996	0.08721		mg/Kg		88	70 - 130	12	35
Toluene	<0.00202	U	0.0996	0.1004		mg/Kg		101	70 - 130	8	35
m-Xylene & p-Xylene	<0.00403	U	0.199	0.1683		mg/Kg		84	70 - 130	12	35
o-Xylene	<0.00202	U	0.0996	0.08470		mg/Kg		85	70 - 130	7	35

Surrogate	MSD %Recovery	MSD Qualifier	Limits
4-Bromofluorobenzene (Surr)	*97*		*70 - 130*
1,4-Difluorobenzene (Surr)	*105*		*70 - 130*

QC Sample Results

Client: Vertex
Project/Site: Corral Fly

Job ID: 890-4751-1
SDG: 23E-02502

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

Lab Sample ID: MB 880-54453/1-A
Matrix: Solid
Analysis Batch: 54532

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 54453

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		05/31/23 09:15	06/01/23 08:40	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		05/31/23 09:15	06/01/23 08:40	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		05/31/23 09:15	06/01/23 08:40	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*170*	*S1+*	*70 - 130*	*05/31/23 09:15*	*06/01/23 08:40*	*1*
o-Terphenyl	*133*	*S1+*	*70 - 130*	*05/31/23 09:15*	*06/01/23 08:40*	*1*

Lab Sample ID: LCS 880-54453/2-A
Matrix: Solid
Analysis Batch: 54532

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 54453

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics (GRO)-C6-C10	1000	913.7		mg/Kg		91	70 - 130
Diesel Range Organics (Over C10-C28)	1000	946.1		mg/Kg		95	70 - 130

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1-Chlorooctane	*107*		*70 - 130*
o-Terphenyl	*84*		*70 - 130*

Lab Sample ID: LCSD 880-54453/3-A
Matrix: Solid
Analysis Batch: 54532

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 54453

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	1000	1008		mg/Kg		101	70 - 130	10	20
Diesel Range Organics (Over C10-C28)	1000	1013		mg/Kg		101	70 - 130	7	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1-Chlorooctane	*122*		*70 - 130*
o-Terphenyl	*93*		*70 - 130*

Lab Sample ID: 880-28880-A-9-B MS
Matrix: Solid
Analysis Batch: 54532

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 54453

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	999	1201		mg/Kg		120	70 - 130
Diesel Range Organics (Over C10-C28)	<50.0	U	999	1124		mg/Kg		113	70 - 130

QC Sample Results

Client: Vertex
Project/Site: Corral Fly

Job ID: 890-4751-1
SDG: 23E-02502

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

Lab Sample ID: 880-28880-A-9-B MS
Matrix: Solid
Analysis Batch: 54532

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 54453

Surrogate	MS %Recovery	MS Qualifier	Limits
1-Chlorooctane	146	S1+	70 - 130
o-Terphenyl	105		70 - 130

Lab Sample ID: 880-28880-A-9-C MSD
Matrix: Solid
Analysis Batch: 54532

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 54453

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	997	1191		mg/Kg		119	70 - 130	1	20
Diesel Range Organics (Over C10-C28)	<50.0	U	997	1120		mg/Kg		112	70 - 130	0	20

Surrogate	MSD %Recovery	MSD Qualifier	Limits
1-Chlorooctane	146	S1+	70 - 130
o-Terphenyl	105		70 - 130

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-54461/1-A
Matrix: Solid
Analysis Batch: 54527

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			05/31/23 21:27	1

Lab Sample ID: LCS 880-54461/2-A
Matrix: Solid
Analysis Batch: 54527

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	250	255.4		mg/Kg		102	90 - 110

Lab Sample ID: LCSD 880-54461/3-A
Matrix: Solid
Analysis Batch: 54527

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	255.1		mg/Kg		102	90 - 110	0	20

Lab Sample ID: 880-28880-A-15-C MS
Matrix: Solid
Analysis Batch: 54527

Client Sample ID: Matrix Spike
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	1570	F1	1250	2680	F1	mg/Kg		89	90 - 110

QC Sample Results

Client: Vertex
Project/Site: Corral Fly

Job ID: 890-4751-1
SDG: 23E-02502

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: 880-28880-A-15-D MSD
Matrix: Solid
Analysis Batch: 54527

Client Sample ID: Matrix Spike Duplicate
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	1570	F1	1250	2682	F1	mg/Kg		89	90 - 110	0	20

QC Association Summary

Client: Vertex
Project/Site: Corral Fly

Job ID: 890-4751-1
SDG: 23E-02502

GC VOA

Prep Batch: 54490

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4751-1	BH23-04 0'	Total/NA	Solid	5035	
890-4751-2	BH23-04 2'	Total/NA	Solid	5035	
890-4751-3	BH23-05 0'	Total/NA	Solid	5035	
890-4751-4	BH23-05 2'	Total/NA	Solid	5035	
890-4751-5	BH23-05 4'	Total/NA	Solid	5035	
MB 880-54490/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-54490/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-54490/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
880-28928-A-2-D MS	Matrix Spike	Total/NA	Solid	5035	
880-28928-A-2-E MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Prep Batch: 54491

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-54491/5-A	Method Blank	Total/NA	Solid	5035	

Analysis Batch: 54492

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4751-7	BH23-06 2'	Total/NA	Solid	8021B	54495
MB 880-54491/5-A	Method Blank	Total/NA	Solid	8021B	54491
MB 880-54495/5-A	Method Blank	Total/NA	Solid	8021B	54495
LCS 880-54495/1-A	Lab Control Sample	Total/NA	Solid	8021B	54495
LCSD 880-54495/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	54495
880-28831-A-21-G MS	Matrix Spike	Total/NA	Solid	8021B	54495
880-28831-A-21-H MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	54495

Prep Batch: 54495

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4751-7	BH23-06 2'	Total/NA	Solid	5035	
MB 880-54495/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-54495/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-54495/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
880-28831-A-21-G MS	Matrix Spike	Total/NA	Solid	5035	
880-28831-A-21-H MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Prep Batch: 54500

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4751-6	BH23-06 0'	Total/NA	Solid	5035	
MB 880-54500/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-54500/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-54500/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
890-4737-A-4-D MS	Matrix Spike	Total/NA	Solid	5035	
890-4737-A-4-E MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Analysis Batch: 54541

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4751-1	BH23-04 0'	Total/NA	Solid	8021B	54490
890-4751-2	BH23-04 2'	Total/NA	Solid	8021B	54490
890-4751-3	BH23-05 0'	Total/NA	Solid	8021B	54490
890-4751-4	BH23-05 2'	Total/NA	Solid	8021B	54490
890-4751-5	BH23-05 4'	Total/NA	Solid	8021B	54490
MB 880-54490/5-A	Method Blank	Total/NA	Solid	8021B	54490

QC Association Summary

Client: Vertex
Project/Site: Corral Fly

Job ID: 890-4751-1
SDG: 23E-02502

GC VOA (Continued)

Analysis Batch: 54541 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 880-54490/1-A	Lab Control Sample	Total/NA	Solid	8021B	54490
LCSD 880-54490/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	54490
880-28928-A-2-D MS	Matrix Spike	Total/NA	Solid	8021B	54490
880-28928-A-2-E MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	54490

Analysis Batch: 54618

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4751-6	BH23-06 0'	Total/NA	Solid	8021B	54500
MB 880-54500/5-A	Method Blank	Total/NA	Solid	8021B	54500
LCS 880-54500/1-A	Lab Control Sample	Total/NA	Solid	8021B	54500
LCSD 880-54500/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	54500
890-4737-A-4-D MS	Matrix Spike	Total/NA	Solid	8021B	54500
890-4737-A-4-E MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	54500

Analysis Batch: 54680

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4751-1	BH23-04 0'	Total/NA	Solid	Total BTEX	
890-4751-2	BH23-04 2'	Total/NA	Solid	Total BTEX	
890-4751-3	BH23-05 0'	Total/NA	Solid	Total BTEX	
890-4751-4	BH23-05 2'	Total/NA	Solid	Total BTEX	
890-4751-5	BH23-05 4'	Total/NA	Solid	Total BTEX	
890-4751-6	BH23-06 0'	Total/NA	Solid	Total BTEX	
890-4751-7	BH23-06 2'	Total/NA	Solid	Total BTEX	

GC Semi VOA

Prep Batch: 54453

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4751-1	BH23-04 0'	Total/NA	Solid	8015NM Prep	
890-4751-2	BH23-04 2'	Total/NA	Solid	8015NM Prep	
890-4751-3	BH23-05 0'	Total/NA	Solid	8015NM Prep	
890-4751-4	BH23-05 2'	Total/NA	Solid	8015NM Prep	
890-4751-5	BH23-05 4'	Total/NA	Solid	8015NM Prep	
890-4751-6	BH23-06 0'	Total/NA	Solid	8015NM Prep	
890-4751-7	BH23-06 2'	Total/NA	Solid	8015NM Prep	
MB 880-54453/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-54453/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-54453/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
880-28880-A-9-B MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
880-28880-A-9-C MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

Analysis Batch: 54532

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4751-1	BH23-04 0'	Total/NA	Solid	8015B NM	54453
890-4751-2	BH23-04 2'	Total/NA	Solid	8015B NM	54453
890-4751-3	BH23-05 0'	Total/NA	Solid	8015B NM	54453
890-4751-4	BH23-05 2'	Total/NA	Solid	8015B NM	54453
890-4751-5	BH23-05 4'	Total/NA	Solid	8015B NM	54453
890-4751-6	BH23-06 0'	Total/NA	Solid	8015B NM	54453
890-4751-7	BH23-06 2'	Total/NA	Solid	8015B NM	54453
MB 880-54453/1-A	Method Blank	Total/NA	Solid	8015B NM	54453

QC Association Summary

Client: Vertex
Project/Site: Corral Fly

Job ID: 890-4751-1
SDG: 23E-02502

GC Semi VOA (Continued)

Analysis Batch: 54532 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 880-54453/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	54453
LCSD 880-54453/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	54453
880-28880-A-9-B MS	Matrix Spike	Total/NA	Solid	8015B NM	54453
880-28880-A-9-C MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	54453

Analysis Batch: 54628

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4751-1	BH23-04 0'	Total/NA	Solid	8015 NM	
890-4751-2	BH23-04 2'	Total/NA	Solid	8015 NM	
890-4751-3	BH23-05 0'	Total/NA	Solid	8015 NM	
890-4751-4	BH23-05 2'	Total/NA	Solid	8015 NM	
890-4751-5	BH23-05 4'	Total/NA	Solid	8015 NM	
890-4751-6	BH23-06 0'	Total/NA	Solid	8015 NM	
890-4751-7	BH23-06 2'	Total/NA	Solid	8015 NM	

HPLC/IC

Leach Batch: 54461

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4751-1	BH23-04 0'	Soluble	Solid	DI Leach	
890-4751-2	BH23-04 2'	Soluble	Solid	DI Leach	
890-4751-3	BH23-05 0'	Soluble	Solid	DI Leach	
890-4751-4	BH23-05 2'	Soluble	Solid	DI Leach	
890-4751-5	BH23-05 4'	Soluble	Solid	DI Leach	
890-4751-6	BH23-06 0'	Soluble	Solid	DI Leach	
890-4751-7	BH23-06 2'	Soluble	Solid	DI Leach	
MB 880-54461/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-54461/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-54461/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
880-28880-A-15-C MS	Matrix Spike	Soluble	Solid	DI Leach	
880-28880-A-15-D MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	

Analysis Batch: 54527

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4751-1	BH23-04 0'	Soluble	Solid	300.0	54461
890-4751-2	BH23-04 2'	Soluble	Solid	300.0	54461
890-4751-3	BH23-05 0'	Soluble	Solid	300.0	54461
890-4751-4	BH23-05 2'	Soluble	Solid	300.0	54461
890-4751-5	BH23-05 4'	Soluble	Solid	300.0	54461
890-4751-6	BH23-06 0'	Soluble	Solid	300.0	54461
890-4751-7	BH23-06 2'	Soluble	Solid	300.0	54461
MB 880-54461/1-A	Method Blank	Soluble	Solid	300.0	54461
LCS 880-54461/2-A	Lab Control Sample	Soluble	Solid	300.0	54461
LCSD 880-54461/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	54461
880-28880-A-15-C MS	Matrix Spike	Soluble	Solid	300.0	54461
880-28880-A-15-D MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	54461

Lab Chronicle

Client: Vertex
Project/Site: Corral Fly

Job ID: 890-4751-1
SDG: 23E-02502

Client Sample ID: BH23-04 0'

Lab Sample ID: 890-4751-1
Matrix: Solid
Date Collected: 05/26/23 10:00
Date Received: 05/26/23 16:20

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.04 g	5 mL	54490	05/31/23 12:00	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	54541	06/01/23 19:42	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			54680	06/02/23 17:30	SM	EET MID
Total/NA	Analysis	8015 NM		1			54628	06/02/23 09:38	SM	EET MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	54453	05/31/23 09:15	AM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	54532	06/01/23 15:19	SM	EET MID
Soluble	Leach	DI Leach			5.05 g	50 mL	54461	05/31/23 16:00	KS	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	54527	05/31/23 22:10	CH	EET MID

Client Sample ID: BH23-04 2'

Lab Sample ID: 890-4751-2
Matrix: Solid
Date Collected: 05/26/23 10:05
Date Received: 05/26/23 16:20

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	54490	05/31/23 12:00	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	54541	06/01/23 20:02	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			54680	06/02/23 17:30	SM	EET MID
Total/NA	Analysis	8015 NM		1			54628	06/02/23 09:38	SM	EET MID
Total/NA	Prep	8015NM Prep			10.05 g	10 mL	54453	05/31/23 09:15	AM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	54532	06/01/23 16:27	SM	EET MID
Soluble	Leach	DI Leach			5.02 g	50 mL	54461	05/31/23 16:00	KS	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	54527	05/31/23 22:15	CH	EET MID

Client Sample ID: BH23-05 0'

Lab Sample ID: 890-4751-3
Matrix: Solid
Date Collected: 05/26/23 10:10
Date Received: 05/26/23 16:20

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	54490	05/31/23 12:00	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	54541	06/01/23 20:22	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			54680	06/02/23 17:30	SM	EET MID
Total/NA	Analysis	8015 NM		1			54628	06/02/23 09:38	SM	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	54453	05/31/23 09:15	AM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	54532	06/01/23 17:15	SM	EET MID
Soluble	Leach	DI Leach			5.05 g	50 mL	54461	05/31/23 16:00	KS	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	54527	05/31/23 22:31	CH	EET MID

Client Sample ID: BH23-05 2'

Lab Sample ID: 890-4751-4
Matrix: Solid
Date Collected: 05/26/23 10:15
Date Received: 05/26/23 16:20

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	54490	05/31/23 12:00	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	54541	06/01/23 20:43	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			54680	06/02/23 17:30	SM	EET MID

Lab Chronicle

Client: Vertex
Project/Site: Corral Fly

Job ID: 890-4751-1
SDG: 23E-02502

Client Sample ID: BH23-05 2'

Lab Sample ID: 890-4751-4
Matrix: Solid
Date Collected: 05/26/23 10:15
Date Received: 05/26/23 16:20

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			54628	06/02/23 09:38	SM	EET MID
Total/NA	Prep	8015NM Prep			10.04 g	10 mL	54453	05/31/23 09:15	AM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	54532	06/01/23 17:36	SM	EET MID
Soluble	Leach	DI Leach			5.03 g	50 mL	54461	05/31/23 16:00	KS	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	54527	05/31/23 22:37	CH	EET MID

Client Sample ID: BH23-05 4'

Lab Sample ID: 890-4751-5
Matrix: Solid
Date Collected: 05/26/23 10:20
Date Received: 05/26/23 16:20

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	54490	05/31/23 12:00	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	54541	06/01/23 21:03	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			54680	06/02/23 17:30	SM	EET MID
Total/NA	Analysis	8015 NM		1			54628	06/02/23 09:38	SM	EET MID
Total/NA	Prep	8015NM Prep			10.04 g	10 mL	54453	05/31/23 09:15	AM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	54532	06/01/23 17:58	SM	EET MID
Soluble	Leach	DI Leach			4.96 g	50 mL	54461	05/31/23 16:00	KS	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	54527	05/31/23 22:42	CH	EET MID

Client Sample ID: BH23-06 0'

Lab Sample ID: 890-4751-6
Matrix: Solid
Date Collected: 05/26/23 10:25
Date Received: 05/26/23 16:20

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	54500	05/31/23 13:23	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	54618	06/02/23 22:31	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			54680	06/05/23 12:45	SM	EET MID
Total/NA	Analysis	8015 NM		1			54628	06/02/23 09:38	SM	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	54453	05/31/23 09:15	AM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	54532	06/01/23 18:20	SM	EET MID
Soluble	Leach	DI Leach			5.03 g	50 mL	54461	05/31/23 16:00	KS	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	54527	05/31/23 22:47	CH	EET MID

Client Sample ID: BH23-06 2'

Lab Sample ID: 890-4751-7
Matrix: Solid
Date Collected: 05/26/23 10:30
Date Received: 05/26/23 16:20

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	54495	05/31/23 12:12	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	54492	06/02/23 05:47	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			54680	06/02/23 17:49	SM	EET MID
Total/NA	Analysis	8015 NM		1			54628	06/02/23 09:38	SM	EET MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	54453	05/31/23 09:15	AM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	54532	06/01/23 18:41	SM	EET MID

Eurofins Carlsbad

Lab Chronicle

Client: Vertex
Project/Site: Corral Fly

Job ID: 890-4751-1
SDG: 23E-02502

Client Sample ID: BH23-06 2'

Date Collected: 05/26/23 10:30
Date Received: 05/26/23 16:20

Lab Sample ID: 890-4751-7

Matrix: Solid

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	54461	05/31/23 16:00	KS	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	54527	05/31/23 22:53	CH	EET MID

Laboratory References:

EET MID = Eurofins Midland, 1211 W. Florida Ave, Midland, TX 79701, TEL (432)704-5440

Accreditation/Certification Summary

Client: Vertex
Project/Site: Corral Fly

Job ID: 890-4751-1
SDG: 23E-02502

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	T104704400-22-25	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: Vertex
Project/Site: Corral Fly

Job ID: 890-4751-1
SDG: 23E-02502

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	EPA	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

EPA = US Environmental Protection Agency

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: Vertex
Project/Site: Corral Fly

Job ID: 890-4751-1
SDG: 23E-02502

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-4751-1	BH23-04 0'	Solid	05/26/23 10:00	05/26/23 16:20	0
890-4751-2	BH23-04 2'	Solid	05/26/23 10:05	05/26/23 16:20	2
890-4751-3	BH23-05 0'	Solid	05/26/23 10:10	05/26/23 16:20	0
890-4751-4	BH23-05 2'	Solid	05/26/23 10:15	05/26/23 16:20	2
890-4751-5	BH23-05 4'	Solid	05/26/23 10:20	05/26/23 16:20	4
890-4751-6	BH23-06 0'	Solid	05/26/23 10:25	05/26/23 16:20	0
890-4751-7	BH23-06 2'	Solid	05/26/23 10:30	05/26/23 16:20	2

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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:	Chance Dixon	Bill to: (if different)	Rob Kirk
Company Name:	Vertex	Company Name:	Solaris
Address:		Address:	
City, State ZIP:		City, State ZIP:	
Phone:	Email:	cdixon@vertex.ca analytical@vertex.ca	

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:	Corral Fly	Turn Around	
Project Number:	23E-02502	☒ Routine ☐ Rush	
Project Location:		Due Date:	
Sampler's Name:	Hunter Klein	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:	IR#007
Cooler Custody Seals:	Yes No N/A	Correction Factor:	-0.2
Sample Custody Seals:	Yes No N/A	Temperature Reading:	7.2
Total Containers:		Corrected Temperature:	7.0

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

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Grab/Comp	# of Cont	Pres. Code	TPH	BTEX	Cl	Sample Comments
BH23-04 0'	Soil	5/16/23	10:00					X	X	X	
BH23-04 2'			10:05					X	X	X	
BH23-05 0'			10:10					X	X	X	
BH23-05 2'			10:15					X	X	X	
BH23-05 4'			10:20					X	X	X	
BH23-06 0'			10:25					X	X	X	
BH23-06 2'			10:30					X	X	X	

890-4751 Chain of Custody

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 Hunter Klein	Cice Cusp	5.23.23 1630			
3			4		
5			6		

Revised Date: 08/25/2020 Rev. 2020.2

Received by OCD: 7/24/2024 3:24:20 PM
Released to Imaging: 7/26/2024 3:59:45 PM
6/5/2023
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Login Sample Receipt Checklist

Client: Vertex

Job Number: 890-4751-1
SDG Number: 23E-02502

Login Number: 4751
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: Vertex

Job Number: 890-4751-1
SDG Number: 23E-02502

Login Number: 4751
List Number: 2
Creator: Rodriguez, Leticia

List Source: Eurofins Midland
List Creation: 05/31/23 11:20 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	

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ANALYTICAL REPORT

PREPARED FOR

Attn: Chance Dixon
Vertex
3101 Boyd Dr
Carlsbad, New Mexico 88220

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JOB DESCRIPTION

Corral Fly
SDG NUMBER 23E-02502

JOB NUMBER

890-4754-1

Eurofins Carlsbad
1089 N Canal St.
Carlsbad NM 88220

See page two for job notes and contact information.

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Job Notes

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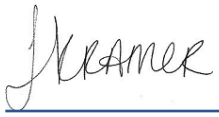
Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis.

Authorization



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Client: Vertex
Project/Site: Corral Fly

Laboratory Job ID: 890-4754-1
SDG: 23E-02502

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Definitions/Glossary

Client: Vertex
Project/Site: Corral Fly

Job ID: 890-4754-1
SDG: 23E-02502

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, 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: Vertex
Project/Site: Corral Fly

Job ID: 890-4754-1
SDG: 23E-02502

Job ID: 890-4754-1

Laboratory: Eurofins Carlsbad

Narrative

Job Narrative
890-4754-1

Receipt
The samples were received on 5/30/2023 4:07 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 12.0°C

Receipt Exceptions
The following samples were received and analyzed from an unpreserved bulk soil jar: BH23-07 0' (890-4754-1), BH23-07 2' (890-4754-2), BH23-08 0' (890-4754-3), BH23-09 0' (890-4754-4), BH23-09 2' (890-4754-5) and BH23-10 0' (890-4754-6).

GC VOA
Method 8021B: The continuing calibration verification (CCV) associated with batch 880-54618 recovered above the upper control limit for Benzene. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. The associated samples are impacted: (CCV 880-54618/51), (CCV 880-54618/64), (CCV 880-54618/82) and (CCV 880-54618/95).

Method 8021B: The surrogate recovery for the blank associated with preparation batch 880-54501 and 880-54507 and analytical batch 880-54618 was outside the control limits.

Method 8021B: The continuing calibration verification (CCV) associated with batch 880-54640 recovered above the upper control limit for Benzene. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. The samples with a detection are being re-analyzed for confirmation. The associated samples are impacted: (CCV 880-54640/33), (CCV 880-54640/51), (CCV 880-54640/64), (CCV 880-54640/82) and (CCV 880-54640/95).

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 surrogate recovery for the blank associated with preparation batch 880-54621 and analytical batch 880-54612 was outside the upper control limits.

Method 8015MOD_NM: Surrogate recovery for the following samples were outside control limits: BH23-07 0' (890-4754-1), BH23-07 2' (890-4754-2), BH23-08 0' (890-4754-3), BH23-09 0' (890-4754-4), BH23-09 2' (890-4754-5), BH23-10 0' (890-4754-6), (890-4753-A-1-H), (890-4753-A-1-I MS) and (890-4753-A-1-J MSD). 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.

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: Vertex
Project/Site: Corral Fly

Job ID: 890-4754-1
SDG: 23E-02502

Client Sample ID: BH23-07 0'

Lab Sample ID: 890-4754-1
Matrix: Solid
Date Collected: 05/30/23 10:00
Date Received: 05/30/23 16:07

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		05/31/23 13:45	06/03/23 22:32	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		05/31/23 13:45	06/03/23 22:32	1
Toluene	<0.00199	U	0.00199		mg/Kg		05/31/23 13:45	06/03/23 22:32	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		05/31/23 13:45	06/03/23 22:32	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		05/31/23 13:45	06/03/23 22:32	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		05/31/23 13:45	06/03/23 22:32	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*92*		*70 - 130*	*05/31/23 13:45*	*06/03/23 22:32*	*1*
1,4-Difluorobenzene (Surr)	*95*		*70 - 130*	*05/31/23 13:45*	*06/03/23 22:32*	*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			06/05/23 16:54	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			06/05/23 11:22	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		06/02/23 09:01	06/02/23 13:22	1
Diesel Range Organics (Over C10-C28)	<49.8	U	49.8		mg/Kg		06/02/23 09:01	06/02/23 13:22	1
OII Range Organics (Over C28-C36)	<49.8	U	49.8		mg/Kg		06/02/23 09:01	06/02/23 13:22	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*148*	*S1+*	*70 - 130*	*06/02/23 09:01*	*06/02/23 13:22*	*1*
o-Terphenyl	*117*		*70 - 130*	*06/02/23 09:01*	*06/02/23 13:22*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**123**		4.98		mg/Kg			06/02/23 11:04	1

Client Sample ID: BH23-07 2'

Lab Sample ID: 890-4754-2
Matrix: Solid
Date Collected: 05/30/23 10:05
Date Received: 05/30/23 16:07

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		05/31/23 13:45	06/03/23 22:53	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		05/31/23 13:45	06/03/23 22:53	1
Toluene	<0.00200	U	0.00200		mg/Kg		05/31/23 13:45	06/03/23 22:53	1
Xylenes, Total	<0.00399	U	0.00399		mg/Kg		05/31/23 13:45	06/03/23 22:53	1
m-Xylene & p-Xylene	<0.00399	U	0.00399		mg/Kg		05/31/23 13:45	06/03/23 22:53	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		05/31/23 13:45	06/03/23 22:53	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*91*		*70 - 130*	*05/31/23 13:45*	*06/03/23 22:53*	*1*
1,4-Difluorobenzene (Surr)	*98*		*70 - 130*	*05/31/23 13:45*	*06/03/23 22:53*	*1*

Client Sample Results

Client: Vertex
Project/Site: Corral Fly

Job ID: 890-4754-1
SDG: 23E-02502

Client Sample ID: BH23-07 2'

Date Collected: 05/30/23 10:05
Date Received: 05/30/23 16:07

Lab Sample ID: 890-4754-2
Matrix: Solid

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			06/05/23 16:54	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			06/05/23 11:22	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		06/02/23 09:01	06/02/23 13:44	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		06/02/23 09:01	06/02/23 13:44	1
OII Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		06/02/23 09:01	06/02/23 13:44	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*158*	*S1+*	*70 - 130*	*06/02/23 09:01*	*06/02/23 13:44*	*1*
o-Terphenyl	*125*		*70 - 130*	*06/02/23 09:01*	*06/02/23 13:44*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**141**		4.99		mg/Kg			06/02/23 11:20	1

Client Sample ID: BH23-08 0'

Date Collected: 05/30/23 10:10
Date Received: 05/30/23 16:07

Lab Sample ID: 890-4754-3
Matrix: Solid

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		05/31/23 13:45	06/03/23 23:13	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		05/31/23 13:45	06/03/23 23:13	1
Toluene	<0.00200	U	0.00200		mg/Kg		05/31/23 13:45	06/03/23 23:13	1
Xylenes, Total	<0.00401	U	0.00401		mg/Kg		05/31/23 13:45	06/03/23 23:13	1
m-Xylene & p-Xylene	<0.00401	U	0.00401		mg/Kg		05/31/23 13:45	06/03/23 23:13	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		05/31/23 13:45	06/03/23 23:13	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*90*		*70 - 130*	*05/31/23 13:45*	*06/03/23 23:13*	*1*
1,4-Difluorobenzene (Surr)	*99*		*70 - 130*	*05/31/23 13:45*	*06/03/23 23:13*	*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			06/05/23 16:54	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			06/05/23 11:22	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		06/02/23 09:01	06/02/23 14:06	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		06/02/23 09:01	06/02/23 14:06	1

Client Sample Results

Client: Vertex
Project/Site: Corral Fly

Job ID: 890-4754-1
SDG: 23E-02502

Client Sample ID: BH23-08 0'

Lab Sample ID: 890-4754-3
Matrix: Solid
Date Collected: 05/30/23 10:10
Date Received: 05/30/23 16:07

Method: SW846 8015B NM - Diesel Range Organics (DRO) (GC) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
OII Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		06/02/23 09:01	06/02/23 14:06	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*156*	*S1+*	*70 - 130*	*06/02/23 09:01*	*06/02/23 14:06*	*1*
o-Terphenyl	*122*		*70 - 130*	*06/02/23 09:01*	*06/02/23 14:06*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**2070**		49.9		mg/Kg			06/02/23 11:25	10

Client Sample ID: BH23-09 0'

Lab Sample ID: 890-4754-4
Matrix: Solid
Date Collected: 05/30/23 10:15
Date Received: 05/30/23 16:07

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		05/31/23 13:43	06/04/23 01:21	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		05/31/23 13:43	06/04/23 01:21	1
Toluene	<0.00200	U	0.00200		mg/Kg		05/31/23 13:43	06/04/23 01:21	1
Xylenes, Total	<0.00399	U	0.00399		mg/Kg		05/31/23 13:43	06/04/23 01:21	1
m-Xylene & p-Xylene	<0.00399	U	0.00399		mg/Kg		05/31/23 13:43	06/04/23 01:21	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		05/31/23 13:43	06/04/23 01:21	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*124*		*70 - 130*	*05/31/23 13:43*	*06/04/23 01:21*	*1*
1,4-Difluorobenzene (Surr)	*97*		*70 - 130*	*05/31/23 13:43*	*06/04/23 01:21*	*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			06/05/23 12:45	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			06/05/23 11:22	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		06/02/23 09:01	06/02/23 14:29	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		06/02/23 09:01	06/02/23 14:29	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		06/02/23 09:01	06/02/23 14:29	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*142*	*S1+*	*70 - 130*	*06/02/23 09:01*	*06/02/23 14:29*	*1*
o-Terphenyl	*111*		*70 - 130*	*06/02/23 09:01*	*06/02/23 14:29*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**163**		5.00		mg/Kg			06/02/23 11:31	1

Client Sample Results

Client: Vertex
Project/Site: Corral Fly

Job ID: 890-4754-1
SDG: 23E-02502

Client Sample ID: BH23-09 2'

Lab Sample ID: 890-4754-5
Matrix: Solid
Date Collected: 05/30/23 10:20
Date Received: 05/30/23 16:07

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		05/31/23 13:43	06/04/23 01:47	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		05/31/23 13:43	06/04/23 01:47	1
Toluene	<0.00200	U	0.00200		mg/Kg		05/31/23 13:43	06/04/23 01:47	1
Xylenes, Total	<0.00401	U	0.00401		mg/Kg		05/31/23 13:43	06/04/23 01:47	1
m-Xylene & p-Xylene	<0.00401	U	0.00401		mg/Kg		05/31/23 13:43	06/04/23 01:47	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		05/31/23 13:43	06/04/23 01:47	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*110*		*70 - 130*	*05/31/23 13:43*	*06/04/23 01:47*	*1*
1,4-Difluorobenzene (Surr)	*90*		*70 - 130*	*05/31/23 13:43*	*06/04/23 01:47*	*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			06/05/23 12:45	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			06/05/23 11:22	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		06/02/23 09:01	06/02/23 14:51	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		06/02/23 09:01	06/02/23 14:51	1
OII Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		06/02/23 09:01	06/02/23 14:51	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*143*	*S1+*	*70 - 130*	*06/02/23 09:01*	*06/02/23 14:51*	*1*
o-Terphenyl	*112*		*70 - 130*	*06/02/23 09:01*	*06/02/23 14:51*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**165**		5.01		mg/Kg			06/02/23 11:36	1

Client Sample ID: BH23-10 0'

Lab Sample ID: 890-4754-6
Matrix: Solid
Date Collected: 05/30/23 10:25
Date Received: 05/30/23 16:07

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00198	U	0.00198		mg/Kg		05/31/23 13:43	06/04/23 02:13	1
Ethylbenzene	<0.00198	U	0.00198		mg/Kg		05/31/23 13:43	06/04/23 02:13	1
Toluene	<0.00198	U	0.00198		mg/Kg		05/31/23 13:43	06/04/23 02:13	1
Xylenes, Total	<0.00396	U	0.00396		mg/Kg		05/31/23 13:43	06/04/23 02:13	1
m-Xylene & p-Xylene	<0.00396	U	0.00396		mg/Kg		05/31/23 13:43	06/04/23 02:13	1
o-Xylene	<0.00198	U	0.00198		mg/Kg		05/31/23 13:43	06/04/23 02:13	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*121*		*70 - 130*	*05/31/23 13:43*	*06/04/23 02:13*	*1*
1,4-Difluorobenzene (Surr)	*92*		*70 - 130*	*05/31/23 13:43*	*06/04/23 02:13*	*1*

Client Sample Results

Client: Vertex
Project/Site: Corral Fly

Job ID: 890-4754-1
SDG: 23E-02502

Client Sample ID: BH23-10 0'

Date Collected: 05/30/23 10:25
Date Received: 05/30/23 16:07

Lab Sample ID: 890-4754-6

Matrix: Solid

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00396	U	0.00396		mg/Kg			06/05/23 12:45	1

Method: SW846 8015 NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**178**		49.8		mg/Kg			06/05/23 11:22	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		06/02/23 09:01	06/02/23 15:13	1
Diesel Range Organics (Over C10-C28)	**178**		49.8		mg/Kg		06/02/23 09:01	06/02/23 15:13	1
OII Range Organics (Over C28-C36)	<49.8	U	49.8		mg/Kg		06/02/23 09:01	06/02/23 15:13	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*141*	*S1+*	*70 - 130*	*06/02/23 09:01*	*06/02/23 15:13*	*1*
o-Terphenyl	*108*		*70 - 130*	*06/02/23 09:01*	*06/02/23 15:13*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**2860**		50.4		mg/Kg			06/02/23 11:41	10

Surrogate Summary

Client: Vertex
Project/Site: Corral Fly

Job ID: 890-4754-1
SDG: 23E-02502

Method: 8021B - Volatile Organic Compounds (GC)

Matrix: Solid **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)	
		BFB1	DFBZ1
Lab Sample ID	Client Sample ID	(70-130)	(70-130)
880-28879-A-1-C MS	Matrix Spike	100	108
880-28879-A-1-D MSD	Matrix Spike Duplicate	111	110
880-28880-A-1-C MS	Matrix Spike	100	96
880-28880-A-1-D MSD	Matrix Spike Duplicate	104	92
890-4754-1	BH23-07 0'	92	95
890-4754-2	BH23-07 2'	91	98
890-4754-3	BH23-08 0'	90	99
890-4754-4	BH23-09 0'	124	97
890-4754-5	BH23-09 2'	110	90
890-4754-6	BH23-10 0'	121	92
LCS 880-54507/1-A	Lab Control Sample	102	104
LCS 880-54508/1-A	Lab Control Sample	95	111
LCSD 880-54507/2-A	Lab Control Sample Dup	110	104
LCSD 880-54508/2-A	Lab Control Sample Dup	98	96
MB 880-54501/5-A	Method Blank	65 S1-	87
MB 880-54507/5-A	Method Blank	68 S1-	91
MB 880-54508/5-A	Method Blank	85	104
MB 880-54587/5-A	Method Blank	86	109

Surrogate Legend

BFB = 4-Bromofluorobenzene (Surr)
DFBZ = 1,4-Difluorobenzene (Surr)

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

Matrix: Solid **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)	
		1CO1	OTPH1
Lab Sample ID	Client Sample ID	(70-130)	(70-130)
890-4753-A-1-I MS	Matrix Spike	137 S1+	96
890-4753-A-1-J MSD	Matrix Spike Duplicate	138 S1+	97
890-4754-1	BH23-07 0'	148 S1+	117
890-4754-2	BH23-07 2'	158 S1+	125
890-4754-3	BH23-08 0'	156 S1+	122
890-4754-4	BH23-09 0'	142 S1+	111
890-4754-5	BH23-09 2'	143 S1+	112
890-4754-6	BH23-10 0'	141 S1+	108
LCS 880-54621/2-A	Lab Control Sample	111	86
LCSD 880-54621/3-A	Lab Control Sample Dup	121	93
MB 880-54621/1-A	Method Blank	158 S1+	125

Surrogate Legend

1CO = 1-Chlorooctane
OTPH = o-Terphenyl

QC Sample Results

Client: Vertex
Project/Site: Corral Fly

Job ID: 890-4754-1
SDG: 23E-02502

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-54501/5-A
Matrix: Solid
Analysis Batch: 54618

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 54501

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		05/31/23 13:35	06/03/23 02:06	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		05/31/23 13:35	06/03/23 02:06	1
Toluene	<0.00200	U	0.00200		mg/Kg		05/31/23 13:35	06/03/23 02:06	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		05/31/23 13:35	06/03/23 02:06	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		05/31/23 13:35	06/03/23 02:06	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		05/31/23 13:35	06/03/23 02:06	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*65*	*S1-*	*70 - 130*	*05/31/23 13:35*	*06/03/23 02:06*	*1*
1,4-Difluorobenzene (Surr)	*87*		*70 - 130*	*05/31/23 13:35*	*06/03/23 02:06*	*1*

Lab Sample ID: MB 880-54507/5-A
Matrix: Solid
Analysis Batch: 54618

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 54507

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		05/31/23 13:43	06/03/23 16:03	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		05/31/23 13:43	06/03/23 16:03	1
Toluene	<0.00200	U	0.00200		mg/Kg		05/31/23 13:43	06/03/23 16:03	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		05/31/23 13:43	06/03/23 16:03	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		05/31/23 13:43	06/03/23 16:03	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		05/31/23 13:43	06/03/23 16:03	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*68*	*S1-*	*70 - 130*	*05/31/23 13:43*	*06/03/23 16:03*	*1*
1,4-Difluorobenzene (Surr)	*91*		*70 - 130*	*05/31/23 13:43*	*06/03/23 16:03*	*1*

Lab Sample ID: LCS 880-54507/1-A
Matrix: Solid
Analysis Batch: 54618

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 54507

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	0.100	0.1003		mg/Kg		100	70 - 130
Ethylbenzene	0.100	0.08512		mg/Kg		85	70 - 130
Toluene	0.100	0.08999		mg/Kg		90	70 - 130
m-Xylene & p-Xylene	0.200	0.1645		mg/Kg		82	70 - 130
o-Xylene	0.100	0.08431		mg/Kg		84	70 - 130

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*102*		*70 - 130*
1,4-Difluorobenzene (Surr)	*104*		*70 - 130*

Lab Sample ID: LCSD 880-54507/2-A
Matrix: Solid
Analysis Batch: 54618

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 54507

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	0.100	0.1280		mg/Kg		128	70 - 130	24	35

QC Sample Results

Client: Vertex
Project/Site: Corral Fly

Job ID: 890-4754-1
SDG: 23E-02502

Method: 8021B - Volatile Organic Compounds (GC) (Continued)

Lab Sample ID: LCSD 880-54507/2-A — **Client Sample ID: Lab Control Sample Dup**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 54618 — **Prep Batch: 54507**

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Ethylbenzene			0.100	0.1051		mg/Kg		105	70 - 130	21	35
Toluene			0.100	0.1101		mg/Kg		110	70 - 130	20	35
m-Xylene & p-Xylene			0.200	0.2038		mg/Kg		102	70 - 130	21	35
o-Xylene			0.100	0.1036		mg/Kg		104	70 - 130	21	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*110*		*70 - 130*
1,4-Difluorobenzene (Surr)	*104*		*70 - 130*

Lab Sample ID: 880-28879-A-1-C MS — **Client Sample ID: Matrix Spike**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 54618 — **Prep Batch: 54507**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	<0.00198	U	0.0998	0.1154		mg/Kg		116	70 - 130
Ethylbenzene	<0.00198	U	0.0998	0.08692		mg/Kg		87	70 - 130
Toluene	<0.00198	U	0.0998	0.09997		mg/Kg		100	70 - 130
m-Xylene & p-Xylene	<0.00396	U	0.200	0.1679		mg/Kg		84	70 - 130
o-Xylene	<0.00198	U	0.0998	0.08417		mg/Kg		84	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*100*		*70 - 130*
1,4-Difluorobenzene (Surr)	*108*		*70 - 130*

Lab Sample ID: 880-28879-A-1-D MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 54618 — **Prep Batch: 54507**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	<0.00198	U	0.100	0.1069		mg/Kg		106	70 - 130	8	35
Ethylbenzene	<0.00198	U	0.100	0.08264		mg/Kg		82	70 - 130	5	35
Toluene	<0.00198	U	0.100	0.09328		mg/Kg		93	70 - 130	7	35
m-Xylene & p-Xylene	<0.00396	U	0.201	0.1617		mg/Kg		81	70 - 130	4	35
o-Xylene	<0.00198	U	0.100	0.08443		mg/Kg		84	70 - 130	0	35

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*111*		*70 - 130*
1,4-Difluorobenzene (Surr)	*110*		*70 - 130*

Lab Sample ID: MB 880-54508/5-A — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 54640 — **Prep Batch: 54508**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		05/31/23 13:45	06/03/23 14:45	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		05/31/23 13:45	06/03/23 14:45	1
Toluene	<0.00200	U	0.00200		mg/Kg		05/31/23 13:45	06/03/23 14:45	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		05/31/23 13:45	06/03/23 14:45	1

QC Sample Results

Client: Vertex
Project/Site: Corral Fly

Job ID: 890-4754-1
SDG: 23E-02502

Method: 8021B - Volatile Organic Compounds (GC) (Continued)

Lab Sample ID: MB 880-54508/5-A
Matrix: Solid
Analysis Batch: 54640

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 54508

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		05/31/23 13:45	06/03/23 14:45	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		05/31/23 13:45	06/03/23 14:45	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*85*		*70 - 130*	*05/31/23 13:45*	*06/03/23 14:45*	*1*
1,4-Difluorobenzene (Surr)	*104*		*70 - 130*	*05/31/23 13:45*	*06/03/23 14:45*	*1*

Lab Sample ID: LCS 880-54508/1-A
Matrix: Solid
Analysis Batch: 54640

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 54508

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene			0.100	0.1234		mg/Kg		123	70 - 130		
Ethylbenzene			0.100	0.09410		mg/Kg		94	70 - 130		
Toluene			0.100	0.1152		mg/Kg		115	70 - 130		
m-Xylene & p-Xylene			0.200	0.1704		mg/Kg		85	70 - 130		
o-Xylene			0.100	0.08628		mg/Kg		86	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*95*		*70 - 130*
1,4-Difluorobenzene (Surr)	*111*		*70 - 130*

Lab Sample ID: LCSD 880-54508/2-A
Matrix: Solid
Analysis Batch: 54640

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 54508

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene			0.100	0.1217		mg/Kg		122	70 - 130	1	35
Ethylbenzene			0.100	0.09601		mg/Kg		96	70 - 130	2	35
Toluene			0.100	0.1031		mg/Kg		103	70 - 130	11	35
m-Xylene & p-Xylene			0.200	0.1759		mg/Kg		88	70 - 130	3	35
o-Xylene			0.100	0.08910		mg/Kg		89	70 - 130	3	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*98*		*70 - 130*
1,4-Difluorobenzene (Surr)	*96*		*70 - 130*

Lab Sample ID: 880-28880-A-1-C MS
Matrix: Solid
Analysis Batch: 54640

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 54508

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene	<0.00200	U	0.0998	0.1105		mg/Kg		111	70 - 130		
Ethylbenzene	<0.00200	U	0.0998	0.09553		mg/Kg		96	70 - 130		
Toluene	<0.00200	U	0.0998	0.09914		mg/Kg		99	70 - 130		
m-Xylene & p-Xylene	<0.00399	U	0.200	0.1696		mg/Kg		85	70 - 130		
o-Xylene	<0.00200	U	0.0998	0.08182		mg/Kg		82	70 - 130		

QC Sample Results

Client: Vertex
Project/Site: Corral Fly

Job ID: 890-4754-1
SDG: 23E-02502

Method: 8021B - Volatile Organic Compounds (GC) (Continued)

Lab Sample ID: 880-28880-A-1-C MS
Matrix: Solid
Analysis Batch: 54640

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 54508

Surrogate	MS %Recovery	MS Qualifier	Limits
4-Bromofluorobenzene (Surr)	100		70 - 130
1,4-Difluorobenzene (Surr)	96		70 - 130

Lab Sample ID: 880-28880-A-1-D MSD
Matrix: Solid
Analysis Batch: 54640

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 54508

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	<0.00200	U	0.0990	0.1185		mg/Kg		120	70 - 130	7	35
Ethylbenzene	<0.00200	U	0.0990	0.1059		mg/Kg		107	70 - 130	10	35
Toluene	<0.00200	U	0.0990	0.1064		mg/Kg		107	70 - 130	7	35
m-Xylene & p-Xylene	<0.00399	U	0.198	0.1882		mg/Kg		95	70 - 130	10	35
o-Xylene	<0.00200	U	0.0990	0.08712		mg/Kg		88	70 - 130	6	35

Surrogate	MSD %Recovery	MSD Qualifier	Limits
4-Bromofluorobenzene (Surr)	104		70 - 130
1,4-Difluorobenzene (Surr)	92		70 - 130

Lab Sample ID: MB 880-54587/5-A
Matrix: Solid
Analysis Batch: 54640

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 54587

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		06/01/23 13:10	06/03/23 02:51	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		06/01/23 13:10	06/03/23 02:51	1
Toluene	<0.00200	U	0.00200		mg/Kg		06/01/23 13:10	06/03/23 02:51	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		06/01/23 13:10	06/03/23 02:51	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		06/01/23 13:10	06/03/23 02:51	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		06/01/23 13:10	06/03/23 02:51	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	86		70 - 130	06/01/23 13:10	06/03/23 02:51	1
1,4-Difluorobenzene (Surr)	109		70 - 130	06/01/23 13:10	06/03/23 02:51	1

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

Lab Sample ID: MB 880-54621/1-A
Matrix: Solid
Analysis Batch: 54612

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 54621

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		06/02/23 08:00	06/02/23 08:29	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		06/02/23 08:00	06/02/23 08:29	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		06/02/23 08:00	06/02/23 08:29	1

QC Sample Results

Client: Vertex
Project/Site: Corral Fly

Job ID: 890-4754-1
SDG: 23E-02502

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

Lab Sample ID: MB 880-54621/1-A
Matrix: Solid
Analysis Batch: 54612

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 54621

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	158	S1+	70 - 130	06/02/23 08:00	06/02/23 08:29	1
o-Terphenyl	125		70 - 130	06/02/23 08:00	06/02/23 08:29	1

Lab Sample ID: LCS 880-54621/2-A
Matrix: Solid
Analysis Batch: 54612

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 54621

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Gasoline Range Organics (GRO)-C6-C10			1000	924.6		mg/Kg		92	70 - 130		
Diesel Range Organics (Over C10-C28)			1000	938.7		mg/Kg		94	70 - 130		

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1-Chlorooctane	111		70 - 130
o-Terphenyl	86		70 - 130

Lab Sample ID: LCSD 880-54621/3-A
Matrix: Solid
Analysis Batch: 54612

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 54621

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			1000	987.6		mg/Kg		99	70 - 130	7	20
Diesel Range Organics (Over C10-C28)			1000	1030		mg/Kg		103	70 - 130	9	20

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
1-Chlorooctane	121		70 - 130
o-Terphenyl	93		70 - 130

Lab Sample ID: 890-4753-A-1-I MS
Matrix: Solid
Analysis Batch: 54612

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 54621

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	997	1236		mg/Kg		122	70 - 130		
Diesel Range Organics (Over C10-C28)	104		997	991.8		mg/Kg		89	70 - 130		

Surrogate	MS %Recovery	MS Qualifier	Limits
1-Chlorooctane	137	S1+	70 - 130
o-Terphenyl	96		70 - 130

QC Sample Results

Client: Vertex
Project/Site: Corral Fly

Job ID: 890-4754-1
SDG: 23E-02502

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

Lab Sample ID: 890-4753-A-1-J MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 54612 — **Prep Batch: 54621**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	997	1167		mg/Kg		115	70 - 130	6	20
Diesel Range Organics (Over C10-C28)	104		997	994.9		mg/Kg		89	70 - 130	0	20

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
1-Chlorooctane	*138*	*S1+*	*70 - 130*
o-Terphenyl	*97*		*70 - 130*

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-54520/1-A — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 54607

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00	U	5.00		mg/Kg			06/02/23 10:16	1

Lab Sample ID: LCS 880-54520/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 54607

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	250	238.7		mg/Kg		95	90 - 110

Lab Sample ID: LCSD 880-54520/3-A — **Client Sample ID: Lab Control Sample Dup**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 54607

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	250	239.8		mg/Kg		96	90 - 110	0	20

Lab Sample ID: 890-4753-A-1-F MS — **Client Sample ID: Matrix Spike**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 54607

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	144		248	390.7		mg/Kg		100	90 - 110

Lab Sample ID: 890-4753-A-1-G MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 54607

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	144		248	391.5		mg/Kg		100	90 - 110	0	20

QC Association Summary

Client: Vertex
Project/Site: Corral Fly

Job ID: 890-4754-1
SDG: 23E-02502

GC VOA

Prep Batch: 54501

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-54501/5-A	Method Blank	Total/NA	Solid	5035	

Prep Batch: 54507

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4754-4	BH23-09 0'	Total/NA	Solid	5035	
890-4754-5	BH23-09 2'	Total/NA	Solid	5035	
890-4754-6	BH23-10 0'	Total/NA	Solid	5035	
MB 880-54507/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-54507/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-54507/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
880-28879-A-1-C MS	Matrix Spike	Total/NA	Solid	5035	
880-28879-A-1-D MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Prep Batch: 54508

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4754-1	BH23-07 0'	Total/NA	Solid	5035	
890-4754-2	BH23-07 2'	Total/NA	Solid	5035	
890-4754-3	BH23-08 0'	Total/NA	Solid	5035	
MB 880-54508/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-54508/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-54508/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
880-28880-A-1-C MS	Matrix Spike	Total/NA	Solid	5035	
880-28880-A-1-D MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Prep Batch: 54587

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-54587/5-A	Method Blank	Total/NA	Solid	5035	

Analysis Batch: 54618

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4754-4	BH23-09 0'	Total/NA	Solid	8021B	54507
890-4754-5	BH23-09 2'	Total/NA	Solid	8021B	54507
890-4754-6	BH23-10 0'	Total/NA	Solid	8021B	54507
MB 880-54501/5-A	Method Blank	Total/NA	Solid	8021B	54501
MB 880-54507/5-A	Method Blank	Total/NA	Solid	8021B	54507
LCS 880-54507/1-A	Lab Control Sample	Total/NA	Solid	8021B	54507
LCSD 880-54507/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	54507
880-28879-A-1-C MS	Matrix Spike	Total/NA	Solid	8021B	54507
880-28879-A-1-D MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	54507

Analysis Batch: 54640

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4754-1	BH23-07 0'	Total/NA	Solid	8021B	54508
890-4754-2	BH23-07 2'	Total/NA	Solid	8021B	54508
890-4754-3	BH23-08 0'	Total/NA	Solid	8021B	54508
MB 880-54508/5-A	Method Blank	Total/NA	Solid	8021B	54508
MB 880-54587/5-A	Method Blank	Total/NA	Solid	8021B	54587
LCS 880-54508/1-A	Lab Control Sample	Total/NA	Solid	8021B	54508
LCSD 880-54508/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	54508
880-28880-A-1-C MS	Matrix Spike	Total/NA	Solid	8021B	54508
880-28880-A-1-D MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	54508

QC Association Summary

Client: Vertex
Project/Site: Corral Fly

Job ID: 890-4754-1
SDG: 23E-02502

GC VOA

Analysis Batch: 54761

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4754-1	BH23-07 0'	Total/NA	Solid	Total BTEX	
890-4754-2	BH23-07 2'	Total/NA	Solid	Total BTEX	
890-4754-3	BH23-08 0'	Total/NA	Solid	Total BTEX	
890-4754-4	BH23-09 0'	Total/NA	Solid	Total BTEX	
890-4754-5	BH23-09 2'	Total/NA	Solid	Total BTEX	
890-4754-6	BH23-10 0'	Total/NA	Solid	Total BTEX	

GC Semi VOA

Analysis Batch: 54612

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4754-1	BH23-07 0'	Total/NA	Solid	8015B NM	54621
890-4754-2	BH23-07 2'	Total/NA	Solid	8015B NM	54621
890-4754-3	BH23-08 0'	Total/NA	Solid	8015B NM	54621
890-4754-4	BH23-09 0'	Total/NA	Solid	8015B NM	54621
890-4754-5	BH23-09 2'	Total/NA	Solid	8015B NM	54621
890-4754-6	BH23-10 0'	Total/NA	Solid	8015B NM	54621
MB 880-54621/1-A	Method Blank	Total/NA	Solid	8015B NM	54621
LCS 880-54621/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	54621
LCSD 880-54621/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	54621
890-4753-A-1-I MS	Matrix Spike	Total/NA	Solid	8015B NM	54621
890-4753-A-1-J MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	54621

Prep Batch: 54621

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4754-1	BH23-07 0'	Total/NA	Solid	8015NM Prep	
890-4754-2	BH23-07 2'	Total/NA	Solid	8015NM Prep	
890-4754-3	BH23-08 0'	Total/NA	Solid	8015NM Prep	
890-4754-4	BH23-09 0'	Total/NA	Solid	8015NM Prep	
890-4754-5	BH23-09 2'	Total/NA	Solid	8015NM Prep	
890-4754-6	BH23-10 0'	Total/NA	Solid	8015NM Prep	
MB 880-54621/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-54621/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-54621/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-4753-A-1-I MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
890-4753-A-1-J MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

Analysis Batch: 54742

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4754-1	BH23-07 0'	Total/NA	Solid	8015 NM	
890-4754-2	BH23-07 2'	Total/NA	Solid	8015 NM	
890-4754-3	BH23-08 0'	Total/NA	Solid	8015 NM	
890-4754-4	BH23-09 0'	Total/NA	Solid	8015 NM	
890-4754-5	BH23-09 2'	Total/NA	Solid	8015 NM	
890-4754-6	BH23-10 0'	Total/NA	Solid	8015 NM	

HPLC/IC

Leach Batch: 54520

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4754-1	BH23-07 0'	Soluble	Solid	DI Leach	
890-4754-2	BH23-07 2'	Soluble	Solid	DI Leach	

QC Association Summary

Client: Vertex
Project/Site: Corral Fly

Job ID: 890-4754-1
SDG: 23E-02502

HPLC/IC (Continued)

Leach Batch: 54520 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4754-3	BH23-08 0'	Soluble	Solid	DI Leach	
890-4754-4	BH23-09 0'	Soluble	Solid	DI Leach	
890-4754-5	BH23-09 2'	Soluble	Solid	DI Leach	
890-4754-6	BH23-10 0'	Soluble	Solid	DI Leach	
MB 880-54520/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-54520/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-54520/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-4753-A-1-F MS	Matrix Spike	Soluble	Solid	DI Leach	
890-4753-A-1-G MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	

Analysis Batch: 54607

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4754-1	BH23-07 0'	Soluble	Solid	300.0	54520
890-4754-2	BH23-07 2'	Soluble	Solid	300.0	54520
890-4754-3	BH23-08 0'	Soluble	Solid	300.0	54520
890-4754-4	BH23-09 0'	Soluble	Solid	300.0	54520
890-4754-5	BH23-09 2'	Soluble	Solid	300.0	54520
890-4754-6	BH23-10 0'	Soluble	Solid	300.0	54520
MB 880-54520/1-A	Method Blank	Soluble	Solid	300.0	54520
LCS 880-54520/2-A	Lab Control Sample	Soluble	Solid	300.0	54520
LCSD 880-54520/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	54520
890-4753-A-1-F MS	Matrix Spike	Soluble	Solid	300.0	54520
890-4753-A-1-G MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	54520

Lab Chronicle

Client: Vertex
Project/Site: Corral Fly

Job ID: 890-4754-1
SDG: 23E-02502

Client Sample ID: BH23-07 0'

Lab Sample ID: 890-4754-1
Matrix: Solid
Date Collected: 05/30/23 10:00
Date Received: 05/30/23 16:07

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	54508	05/31/23 13:45	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	54640	06/03/23 22:32	AJ	EET MID
Total/NA	Analysis	Total BTEX		1			54761	06/05/23 16:54	SM	EET MID
Total/NA	Analysis	8015 NM		1			54742	06/05/23 11:22	SM	EET MID
Total/NA	Prep	8015NM Prep			10.05 g	10 mL	54621	06/02/23 09:01	AM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	54612	06/02/23 13:22	SM	EET MID
Soluble	Leach	DI Leach			5.02 g	50 mL	54520	05/31/23 15:16	KS	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	54607	06/02/23 11:04	CH	EET MID

Client Sample ID: BH23-07 2'

Lab Sample ID: 890-4754-2
Matrix: Solid
Date Collected: 05/30/23 10:05
Date Received: 05/30/23 16:07

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	54508	05/31/23 13:45	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	54640	06/03/23 22:53	AJ	EET MID
Total/NA	Analysis	Total BTEX		1			54761	06/05/23 16:54	SM	EET MID
Total/NA	Analysis	8015 NM		1			54742	06/05/23 11:22	SM	EET MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	54621	06/02/23 09:01	AM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	54612	06/02/23 13:44	SM	EET MID
Soluble	Leach	DI Leach			5.01 g	50 mL	54520	05/31/23 15:16	KS	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	54607	06/02/23 11:20	CH	EET MID

Client Sample ID: BH23-08 0'

Lab Sample ID: 890-4754-3
Matrix: Solid
Date Collected: 05/30/23 10:10
Date Received: 05/30/23 16:07

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	54508	05/31/23 13:45	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	54640	06/03/23 23:13	AJ	EET MID
Total/NA	Analysis	Total BTEX		1			54761	06/05/23 16:54	SM	EET MID
Total/NA	Analysis	8015 NM		1			54742	06/05/23 11:22	SM	EET MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	54621	06/02/23 09:01	AM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	54612	06/02/23 14:06	SM	EET MID
Soluble	Leach	DI Leach			5.01 g	50 mL	54520	05/31/23 15:16	KS	EET MID
Soluble	Analysis	300.0		10	50 mL	50 mL	54607	06/02/23 11:25	CH	EET MID

Client Sample ID: BH23-09 0'

Lab Sample ID: 890-4754-4
Matrix: Solid
Date Collected: 05/30/23 10:15
Date Received: 05/30/23 16:07

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	54507	05/31/23 13:43	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	54618	06/04/23 01:21	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			54761	06/05/23 12:45	SM	EET MID

Lab Chronicle

Client: Vertex
Project/Site: Corral Fly

Job ID: 890-4754-1
SDG: 23E-02502

Client Sample ID: BH23-09 0'

Lab Sample ID: 890-4754-4
Matrix: Solid
Date Collected: 05/30/23 10:15
Date Received: 05/30/23 16:07

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			54742	06/05/23 11:22	SM	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	54621	06/02/23 09:01	AM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	54612	06/02/23 14:29	SM	EET MID
Soluble	Leach	DI Leach			5 g	50 mL	54520	05/31/23 15:16	KS	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	54607	06/02/23 11:31	CH	EET MID

Client Sample ID: BH23-09 2'

Lab Sample ID: 890-4754-5
Matrix: Solid
Date Collected: 05/30/23 10:20
Date Received: 05/30/23 16:07

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	54507	05/31/23 13:43	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	54618	06/04/23 01:47	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			54761	06/05/23 12:45	SM	EET MID
Total/NA	Analysis	8015 NM		1			54742	06/05/23 11:22	SM	EET MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	54621	06/02/23 09:01	AM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	54612	06/02/23 14:51	SM	EET MID
Soluble	Leach	DI Leach			4.99 g	50 mL	54520	05/31/23 15:16	KS	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	54607	06/02/23 11:36	CH	EET MID

Client Sample ID: BH23-10 0'

Lab Sample ID: 890-4754-6
Matrix: Solid
Date Collected: 05/30/23 10:25
Date Received: 05/30/23 16:07

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	54507	05/31/23 13:43	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	54618	06/04/23 02:13	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			54761	06/05/23 12:45	SM	EET MID
Total/NA	Analysis	8015 NM		1			54742	06/05/23 11:22	SM	EET MID
Total/NA	Prep	8015NM Prep			10.04 g	10 mL	54621	06/02/23 09:01	AM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	54612	06/02/23 15:13	SM	EET MID
Soluble	Leach	DI Leach			4.96 g	50 mL	54520	05/31/23 15:16	KS	EET MID
Soluble	Analysis	300.0		10	50 mL	50 mL	54607	06/02/23 11:41	CH	EET MID

Laboratory References:

EET MID = Eurofins Midland, 1211 W. Florida Ave, Midland, TX 79701, TEL (432)704-5440

Accreditation/Certification Summary

Client: Vertex
Project/Site: Corral Fly

Job ID: 890-4754-1
SDG: 23E-02502

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	T104704400-22-25	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: Vertex
Project/Site: Corral Fly

Job ID: 890-4754-1
SDG: 23E-02502

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	EPA	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

EPA = US Environmental Protection Agency

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: Vertex
Project/Site: Corral Fly

Job ID: 890-4754-1
SDG: 23E-02502

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
890-4754-1	BH23-07 0'	Solid	05/30/23 10:00	05/30/23 16:07
890-4754-2	BH23-07 2'	Solid	05/30/23 10:05	05/30/23 16:07
890-4754-3	BH23-08 0'	Solid	05/30/23 10:10	05/30/23 16:07
890-4754-4	BH23-09 0'	Solid	05/30/23 10:15	05/30/23 16:07
890-4754-5	BH23-09 2'	Solid	05/30/23 10:20	05/30/23 16:07
890-4754-6	BH23-10 0'	Solid	05/30/23 10:25	05/30/23 16:07

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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: _____

www.xenco.com Page _____ of _____

Project Manager:	Chance Dixon	Bill to: (if different)	Rob Kirk
Company Name:	Vertex	Company Name:	Solaris
Address:	On File	Address:	
City, State ZIP:		City, State ZIP:	
Phone:	Email:	cdixon@vertex.ca	analytical@vertex.ca

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:	Corral Fly	Turn Around	☒ Routine ☐ Rush
Project Number:	23E-02502	Due Date:	
Project Location:		TAT starts the day received by the lab, if received by 4:30pm	
Sampler's Name:	Hunter Klein		
PO #:			

SAMPLE RECEIPT			
Temp Blank:	Yes No	Wet Ice:	Yes No
Samples Received Intact:	Yes No	Thermometer ID:	TAM-007
Cooler Custody Seals:	Yes No N/A	Correction Factor:	-0.2
Sample Custody Seals:	Yes No N/A	Temperature Reading:	14.3
Total Containers:		Corrected Temperature:	12.0

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

ANALYSIS REQUEST

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Grab/ Comp	# of Cont	TPH	BTEX	Cl	Sample Comments
BH23-07 0'	Soil	5/30/23	10:00				X	X	X	
BH23-07 2'			10:05				X	X	X	
BH23-08 0'			10:10				X	X	X	
BH23-09 0'			10:15				X	X	X	
BH23-09 2'			10:20				X	X	X	
BH23-10 0'			10:25				X	X	X	

890-4754 Chain of Custody

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	Hunter Klein	Amanda Estep	5/30/23 1607			
3				4		
5				6		

Revised Date: 08/25/2020 Rev. 2020.2

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Received by OCD: 7/24/2024 3:24:20 PM

Released to Imaging: 7/26/2024 3:59:45 PM

Eurofins Carlsbad
1089 N Canal St
Carlsbad NM 88220
Phone. 575-988-3199 Fax: 575-988-3199

Chain of Custody Record

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Client Information (Sub Contract Lab)	Sampler	Lab PM	Carrier Tracking No(s)	COC No
Client Contact: Shipping/Receiving	Phone	Kramer Jessica E-Mail Jessica Kramer@et.eurofinsus com	State of Origin. New Mexico	890-1305 1 Page: Page 1 of 1
Company: Eurofins Environment Testing South Centr		Accreditations Required (See note) NELAP - Texas		Job #: 890-4754-1
Address: 1211 W Florida Ave	Due Date Requested 6/5/2023			
City: Midland	TAT Requested (days)			
State Zip: TX 79701				
Phone: 432-704-5440(Tel)	PO #:			
Email	WO #:			
Project Name: Corral Fly	Project #: 89000162			
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, Y Trizma, 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)	8015MOD_NM/8015NM_S_Prep (MOD) Full TPH	300_ORGFM_28D/DI_LEACH Chloride	8021B/5035FP_Calc BTEX - LL	Total_BTEX_GCV	8015MOD_Calc	Total Number of containers	Special Instructions/Note:
			Preservation Code:										
BH23-07 0' (890-4754-1)	5/30/23	10 00 Mountain		Solid			X	X	X	X	X	1	
BH23-07 2' (890-4754-2)	5/30/23	10 05 Mountain		Solid			X	X	X	X	X	1	
BH23-08 0' (890-4754-3)	5/30/23	10 10 Mountain		Solid			X	X	X	X	X	1	
BH23-09 0' (890-4754-4)	5/30/23	10 15 Mountain		Solid			X	X	X	X	X	1	
BH23-09 2' (890-4754-5)	5/30/23	10 20 Mountain		Solid			X	X	X	X	X	1	
BH23-10 0' (890-4754-6)	5/30/23	10 25 Mountain		Solid			X	X	X	X	X	1	

Note: Since laboratory accreditations are subject to change Eurofins Environment Testing South Central, LLC places the ownership of method analyte & accreditation compliance upon our 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 Environment Testing South Central LLC laboratory or other instructions will be provided Any changes to accreditation status should be brought to Eurofins Environment Testing South Central LLC attention immediately If all requested accreditations are current to date return the signed Chain of Custody attesting to said compliance to Eurofins Environment Testing South Central 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
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: 06/08/2021

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6/5/2023
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Released to Imaging: 7/26/2024 3:59:45 PM

Login Sample Receipt Checklist

Client: Vertex

Job Number: 890-4754-1
SDG Number: 23E-02502

Login Number: 4754
List Number: 1
Creator: Stutzman, Amanda

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: Vertex

Job Number: 890-4754-1
SDG Number: 23E-02502

Login Number: 4754
List Number: 2
Creator: Teel, Brianna

List Source: Eurofins Midland
List Creation: 06/01/23 11:50 AM

Question	Answer	Comment
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	

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ANALYTICAL REPORT

PREPARED FOR

Attn: Chance Dixon
Vertex
3101 Boyd Dr
Carlsbad, New Mexico 88220

Generated 6/14/2023 3:20:29 PM

JOB DESCRIPTION

Corral Fly
SDG NUMBER 23E-02502

JOB NUMBER

890-4786-1

Eurofins Carlsbad
1089 N Canal St.
Carlsbad NM 88220

See page two for job notes and contact information.

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my EOL

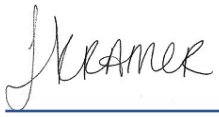
Eurofins Carlsbad

Job Notes

This report may not be reproduced except in full, and with written approval from the laboratory. The results relate only to the samples tested. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

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



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Authorized for release by
Jessica Kramer, Project Manager
Jessica.Kramer@et.eurofinsus.com
(432)704-5440

Client: Vertex
Project/Site: Corral Fly

Laboratory Job ID: 890-4786-1
SDG: 23E-02502

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Eurofins Carlsbad
6/14/2023

Definitions/Glossary

Client: Vertex
Project/Site: Corral Fly

Job ID: 890-4786-1
SDG: 23E-02502

Qualifiers

GC VOA

Qualifier	Qualifier Description
*+	LCS and/or LCSD is outside acceptance limits, high biased.
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
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: Vertex
Project/Site: Corral Fly

Job ID: 890-4786-1
SDG: 23E-02502

Job ID: 890-4786-1

Laboratory: Eurofins Carlsbad

Narrative

Job Narrative
890-4786-1

Receipt
The samples were received on 6/6/2023 2:29 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 10.4°C

Receipt Exceptions
The following samples were received and analyzed from an unpreserved bulk soil jar: BH23-08 2' (890-4786-1), BH23-08 4' (890-4786-2), BH23-11 0' (890-4786-3), BH23-11 2' (890-4786-4), BH23-12 0' (890-4786-5) and BH23-12 2' (890-4786-6).

GC VOA
Method 8021B: The laboratory control sample duplicate (LCSD) for preparation batch 880-55037 and analytical batch 880-55385 recovered outside control limits for the following analytes: Benzene and Toluene. These analytes were biased high in the LCSD however, they were acceptable in the LCS and only one is required by method; therefore, the data have been reported.

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: BH23-08 2' (890-4786-1), BH23-08 4' (890-4786-2), BH23-11 2' (890-4786-4), BH23-12 0' (890-4786-5), BH23-12 2' (890-4786-6), (MB 880-55013/1-A), (880-29220-A-1-B), (880-29220-A-1-C MS) and (880-29220-A-1-D MSD). Evidence of matrix interferences is not obvious.

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: Vertex
Project/Site: Corral Fly

Job ID: 890-4786-1
SDG: 23E-02502

Client Sample ID: BH23-08 2'

Lab Sample ID: 890-4786-1
Matrix: Solid
Date Collected: 06/06/23 09:00
Date Received: 06/06/23 14:29

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00198	U *+	0.00198		mg/Kg		06/08/23 13:04	06/13/23 19:49	1
Ethylbenzene	<0.00198	U	0.00198		mg/Kg		06/08/23 13:04	06/13/23 19:49	1
Toluene	<0.00198	U *+	0.00198		mg/Kg		06/08/23 13:04	06/13/23 19:49	1
Xylenes, Total	<0.00396	U	0.00396		mg/Kg		06/08/23 13:04	06/13/23 19:49	1
m-Xylene & p-Xylene	<0.00396	U	0.00396		mg/Kg		06/08/23 13:04	06/13/23 19:49	1
o-Xylene	<0.00198	U	0.00198		mg/Kg		06/08/23 13:04	06/13/23 19:49	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*79*		*70 - 130*	*06/08/23 13:04*	*06/13/23 19:49*	*1*
1,4-Difluorobenzene (Surr)	*102*		*70 - 130*	*06/08/23 13:04*	*06/13/23 19:49*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00396	U	0.00396		mg/Kg			06/14/23 09:58	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			06/12/23 14:13	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		06/08/23 09:14	06/10/23 03:49	1
Diesel Range Organics (Over C10-C28)	<49.8	U	49.8		mg/Kg		06/08/23 09:14	06/10/23 03:49	1
OII Range Organics (Over C28-C36)	<49.8	U	49.8		mg/Kg		06/08/23 09:14	06/10/23 03:49	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*149*	*S1+*	*70 - 130*	*06/08/23 09:14*	*06/10/23 03:49*	*1*
o-Terphenyl	*116*		*70 - 130*	*06/08/23 09:14*	*06/10/23 03:49*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**268**		4.99		mg/Kg			06/09/23 12:05	1

Client Sample ID: BH23-08 4'

Lab Sample ID: 890-4786-2
Matrix: Solid
Date Collected: 06/06/23 09:05
Date Received: 06/06/23 14:29

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		06/08/23 13:04	06/13/23 20:09	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		06/08/23 13:04	06/13/23 20:09	1
Toluene	<0.00199	U *+	0.00199		mg/Kg		06/08/23 13:04	06/13/23 20:09	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		06/08/23 13:04	06/13/23 20:09	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		06/08/23 13:04	06/13/23 20:09	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		06/08/23 13:04	06/13/23 20:09	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*89*		*70 - 130*	*06/08/23 13:04*	*06/13/23 20:09*	*1*
1,4-Difluorobenzene (Surr)	*102*		*70 - 130*	*06/08/23 13:04*	*06/13/23 20:09*	*1*

Client Sample Results

Client: Vertex
Project/Site: Corral Fly

Job ID: 890-4786-1
SDG: 23E-02502

Client Sample ID: BH23-08 4'

Lab Sample ID: 890-4786-2
Matrix: Solid
Date Collected: 06/06/23 09:05
Date Received: 06/06/23 14:29

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			06/14/23 09:58	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			06/12/23 14:13	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		06/08/23 09:14	06/10/23 04:11	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		06/08/23 09:14	06/10/23 04:11	1
OII Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		06/08/23 09:14	06/10/23 04:11	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*131*	*S1+*	*70 - 130*	*06/08/23 09:14*	*06/10/23 04:11*	*1*
o-Terphenyl	*103*		*70 - 130*	*06/08/23 09:14*	*06/10/23 04:11*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**284**		4.98		mg/Kg			06/09/23 12:10	1

Client Sample ID: BH23-11 0'

Lab Sample ID: 890-4786-3
Matrix: Solid
Date Collected: 06/06/23 09:10
Date Received: 06/06/23 14:29

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00198	U *+	0.00198		mg/Kg		06/08/23 13:04	06/13/23 20:29	1
Ethylbenzene	<0.00198	U	0.00198		mg/Kg		06/08/23 13:04	06/13/23 20:29	1
Toluene	<0.00198	U *+	0.00198		mg/Kg		06/08/23 13:04	06/13/23 20:29	1
Xylenes, Total	<0.00396	U	0.00396		mg/Kg		06/08/23 13:04	06/13/23 20:29	1
m-Xylene & p-Xylene	<0.00396	U	0.00396		mg/Kg		06/08/23 13:04	06/13/23 20:29	1
o-Xylene	<0.00198	U	0.00198		mg/Kg		06/08/23 13:04	06/13/23 20:29	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*93*		*70 - 130*	*06/08/23 13:04*	*06/13/23 20:29*	*1*
1,4-Difluorobenzene (Surr)	*100*		*70 - 130*	*06/08/23 13:04*	*06/13/23 20:29*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00396	U	0.00396		mg/Kg			06/14/23 09:58	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			06/12/23 14:13	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		06/08/23 09:14	06/10/23 04:33	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		06/08/23 09:14	06/10/23 04:33	1

Client Sample Results

Client: Vertex
Project/Site: Corral Fly

Job ID: 890-4786-1
SDG: 23E-02502

Client Sample ID: BH23-11 0'

Lab Sample ID: 890-4786-3
Matrix: Solid
Date Collected: 06/06/23 09:10
Date Received: 06/06/23 14:29

Method: SW846 8015B NM - Diesel Range Organics (DRO) (GC) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
OII Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		06/08/23 09:14	06/10/23 04:33	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*130*		*70 - 130*	*06/08/23 09:14*	*06/10/23 04:33*	*1*
o-Terphenyl	*100*		*70 - 130*	*06/08/23 09:14*	*06/10/23 04:33*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**2430**		25.0		mg/Kg			06/09/23 12:27	5

Client Sample ID: BH23-11 2'

Lab Sample ID: 890-4786-4
Matrix: Solid
Date Collected: 06/06/23 09:15
Date Received: 06/06/23 14:29

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		06/08/23 13:04	06/13/23 20:50	1
Ethylbenzene	<0.00201	U	0.00201		mg/Kg		06/08/23 13:04	06/13/23 20:50	1
Toluene	<0.00201	U *+	0.00201		mg/Kg		06/08/23 13:04	06/13/23 20:50	1
Xylenes, Total	<0.00402	U	0.00402		mg/Kg		06/08/23 13:04	06/13/23 20:50	1
m-Xylene & p-Xylene	<0.00402	U	0.00402		mg/Kg		06/08/23 13:04	06/13/23 20:50	1
o-Xylene	<0.00201	U	0.00201		mg/Kg		06/08/23 13:04	06/13/23 20:50	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*89*		*70 - 130*	*06/08/23 13:04*	*06/13/23 20:50*	*1*
1,4-Difluorobenzene (Surr)	*104*		*70 - 130*	*06/08/23 13:04*	*06/13/23 20:50*	*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			06/14/23 09:58	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			06/12/23 14:13	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		06/08/23 09:14	06/10/23 04:55	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		06/08/23 09:14	06/10/23 04:55	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		06/08/23 09:14	06/10/23 04:55	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*137*	*S1+*	*70 - 130*	*06/08/23 09:14*	*06/10/23 04:55*	*1*
o-Terphenyl	*105*		*70 - 130*	*06/08/23 09:14*	*06/10/23 04:55*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**1780**		24.8		mg/Kg			06/09/23 12:32	5

Client Sample Results

Client: Vertex
Project/Site: Corral Fly

Job ID: 890-4786-1
SDG: 23E-02502

Client Sample ID: BH23-12 0'

Lab Sample ID: 890-4786-5
Matrix: Solid
Date Collected: 06/06/23 09:20
Date Received: 06/06/23 14:29

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		06/08/23 13:04	06/13/23 21:10	1
Ethylbenzene	<0.00202	U	0.00202		mg/Kg		06/08/23 13:04	06/13/23 21:10	1
Toluene	<0.00202	U *+	0.00202		mg/Kg		06/08/23 13:04	06/13/23 21:10	1
Xylenes, Total	<0.00404	U	0.00404		mg/Kg		06/08/23 13:04	06/13/23 21:10	1
m-Xylene & p-Xylene	<0.00404	U	0.00404		mg/Kg		06/08/23 13:04	06/13/23 21:10	1
o-Xylene	<0.00202	U	0.00202		mg/Kg		06/08/23 13:04	06/13/23 21:10	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*87*		*70 - 130*	*06/08/23 13:04*	*06/13/23 21:10*	*1*
1,4-Difluorobenzene (Surr)	*98*		*70 - 130*	*06/08/23 13:04*	*06/13/23 21:10*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00404	U	0.00404		mg/Kg			06/14/23 09:58	1

Method: SW846 8015 NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**607**		50.0		mg/Kg			06/12/23 14:13	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		06/08/23 09:14	06/10/23 05:17	1
Diesel Range Organics (Over C10-C28)	**607**		50.0		mg/Kg		06/08/23 09:14	06/10/23 05:17	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		06/08/23 09:14	06/10/23 05:17	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*138*	*S1+*	*70 - 130*	*06/08/23 09:14*	*06/10/23 05:17*	*1*
o-Terphenyl	*106*		*70 - 130*	*06/08/23 09:14*	*06/10/23 05:17*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**9230**		99.6		mg/Kg			06/09/23 12:49	20

Client Sample ID: BH23-12 2'

Lab Sample ID: 890-4786-6
Matrix: Solid
Date Collected: 06/06/23 09:25
Date Received: 06/06/23 14:29

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		06/08/23 13:04	06/13/23 21:31	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		06/08/23 13:04	06/13/23 21:31	1
Toluene	<0.00200	U *+	0.00200		mg/Kg		06/08/23 13:04	06/13/23 21:31	1
Xylenes, Total	<0.00401	U	0.00401		mg/Kg		06/08/23 13:04	06/13/23 21:31	1
m-Xylene & p-Xylene	<0.00401	U	0.00401		mg/Kg		06/08/23 13:04	06/13/23 21:31	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		06/08/23 13:04	06/13/23 21:31	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*87*		*70 - 130*	*06/08/23 13:04*	*06/13/23 21:31*	*1*
1,4-Difluorobenzene (Surr)	*102*		*70 - 130*	*06/08/23 13:04*	*06/13/23 21:31*	*1*

Client Sample Results

Client: Vertex
Project/Site: Corral Fly

Job ID: 890-4786-1
SDG: 23E-02502

Client Sample ID: BH23-12 2'

Date Collected: 06/06/23 09:25
Date Received: 06/06/23 14:29

Lab Sample ID: 890-4786-6

Matrix: Solid

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			06/14/23 09:58	1

Method: SW846 8015 NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**729**		49.9		mg/Kg			06/12/23 14:13	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		06/08/23 09:14	06/10/23 05:38	1
Diesel Range Organics (Over C10-C28)	**729**		49.9		mg/Kg		06/08/23 09:14	06/10/23 05:38	1
OII Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		06/08/23 09:14	06/10/23 05:38	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*147*	*S1+*	*70 - 130*	*06/08/23 09:14*	*06/10/23 05:38*	*1*
o-Terphenyl	*113*		*70 - 130*	*06/08/23 09:14*	*06/10/23 05:38*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**9770**		99.0		mg/Kg			06/09/23 12:55	20

Surrogate Summary

Client: Vertex
Project/Site: Corral Fly

Job ID: 890-4786-1
SDG: 23E-02502

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)
890-4781-A-1-F MS	Matrix Spike	93	92
890-4781-A-1-G MSD	Matrix Spike Duplicate	108	102
890-4786-1	BH23-08 2'	79	102
890-4786-2	BH23-08 4'	89	102
890-4786-3	BH23-11 0'	93	100
890-4786-4	BH23-11 2'	89	104
890-4786-5	BH23-12 0'	87	98
890-4786-6	BH23-12 2'	87	102
LCS 880-55037/1-A	Lab Control Sample	97	105
LCSD 880-55037/2-A	Lab Control Sample Dup	96	102
MB 880-55037/5-A	Method Blank	90	111

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)
880-29220-A-1-C MS	Matrix Spike	159 S1+	116
880-29220-A-1-D MSD	Matrix Spike Duplicate	149 S1+	109
890-4786-1	BH23-08 2'	149 S1+	116
890-4786-2	BH23-08 4'	131 S1+	103
890-4786-3	BH23-11 0'	130	100
890-4786-4	BH23-11 2'	137 S1+	105
890-4786-5	BH23-12 0'	138 S1+	106
890-4786-6	BH23-12 2'	147 S1+	113
LCS 880-55013/2-A	Lab Control Sample	125	97
LCSD 880-55013/3-A	Lab Control Sample Dup	121	93
MB 880-55013/1-A	Method Blank	0.02 S1-	0.008 S1-

Surrogate Legend

1CO = 1-Chlorooctane
OTPH = o-Terphenyl

QC Sample Results

Client: Vertex
Project/Site: Corral Fly

Job ID: 890-4786-1
SDG: 23E-02502

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-55037/5-A
Matrix: Solid
Analysis Batch: 55385

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 55037

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		06/08/23 13:04	06/13/23 14:24	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		06/08/23 13:04	06/13/23 14:24	1
Toluene	<0.00200	U	0.00200		mg/Kg		06/08/23 13:04	06/13/23 14:24	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		06/08/23 13:04	06/13/23 14:24	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		06/08/23 13:04	06/13/23 14:24	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		06/08/23 13:04	06/13/23 14:24	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*90*		*70 - 130*	*06/08/23 13:04*	*06/13/23 14:24*	*1*
1,4-Difluorobenzene (Surr)	*111*		*70 - 130*	*06/08/23 13:04*	*06/13/23 14:24*	*1*

Lab Sample ID: LCS 880-55037/1-A
Matrix: Solid
Analysis Batch: 55385

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 55037

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene			0.100	0.1164		mg/Kg		116	70 - 130		
Ethylbenzene			0.100	0.1040		mg/Kg		104	70 - 130		
Toluene			0.100	0.1157		mg/Kg		116	70 - 130		
m-Xylene & p-Xylene			0.200	0.1933		mg/Kg		97	70 - 130		
o-Xylene			0.100	0.09140		mg/Kg		91	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*97*		*70 - 130*
1,4-Difluorobenzene (Surr)	*105*		*70 - 130*

Lab Sample ID: LCSD 880-55037/2-A
Matrix: Solid
Analysis Batch: 55385

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 55037

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene			0.100	0.1440	*+	mg/Kg		144	70 - 130	21	35
Ethylbenzene			0.100	0.1158		mg/Kg		116	70 - 130	11	35
Toluene			0.100	0.1378	*+	mg/Kg		138	70 - 130	17	35
m-Xylene & p-Xylene			0.200	0.2210		mg/Kg		111	70 - 130	13	35
o-Xylene			0.100	0.1050		mg/Kg		105	70 - 130	14	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*96*		*70 - 130*
1,4-Difluorobenzene (Surr)	*102*		*70 - 130*

Lab Sample ID: 890-4781-A-1-F MS
Matrix: Solid
Analysis Batch: 55385

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 55037

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene	<0.00199	U *+	0.101	0.1061		mg/Kg		105	70 - 130		
Ethylbenzene	<0.00199	U	0.101	0.07489		mg/Kg		74	70 - 130		

QC Sample Results

Client: Vertex
Project/Site: Corral Fly

Job ID: 890-4786-1
SDG: 23E-02502

Method: 8021B - Volatile Organic Compounds (GC) (Continued)

Lab Sample ID: 890-4781-A-1-F MS — **Client Sample ID: Matrix Spike**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 55385 — **Prep Batch: 55037**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Toluene	<0.00199	U *+	0.101	0.1028		mg/Kg		102	70 - 130
m-Xylene & p-Xylene	<0.00398	U F1	0.202	0.1372	F1	mg/Kg		68	70 - 130
o-Xylene	<0.00199	U F1	0.101	0.06696	F1	mg/Kg		66	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*93*		*70 - 130*
1,4-Difluorobenzene (Surr)	*92*		*70 - 130*

Lab Sample ID: 890-4781-A-1-G MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 55385 — **Prep Batch: 55037**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	<0.00199	U *+	0.100	0.1063		mg/Kg		106	70 - 130	0	35
Ethylbenzene	<0.00199	U	0.100	0.08181		mg/Kg		82	70 - 130	9	35
Toluene	<0.00199	U *+	0.100	0.1059		mg/Kg		106	70 - 130	3	35
m-Xylene & p-Xylene	<0.00398	U F1	0.200	0.1631		mg/Kg		81	70 - 130	17	35
o-Xylene	<0.00199	U F1	0.100	0.07958		mg/Kg		79	70 - 130	17	35

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*108*		*70 - 130*
1,4-Difluorobenzene (Surr)	*102*		*70 - 130*

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

Lab Sample ID: MB 880-55013/1-A — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 55082 — **Prep Batch: 55013**

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		06/08/23 09:14	06/09/23 19:43	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		06/08/23 09:14	06/09/23 19:43	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		06/08/23 09:14	06/09/23 19:43	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*0.02*	*S1-*	*70 - 130*	*06/08/23 09:14*	*06/09/23 19:43*	*1*
o-Terphenyl	*0.008*	*S1-*	*70 - 130*	*06/08/23 09:14*	*06/09/23 19:43*	*1*

Lab Sample ID: LCS 880-55013/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 55082 — **Prep Batch: 55013**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics (GRO)-C6-C10	1000	845.9		mg/Kg		85	70 - 130
Diesel Range Organics (Over C10-C28)	1000	868.2		mg/Kg		87	70 - 130

QC Sample Results

Client: Vertex
Project/Site: Corral Fly

Job ID: 890-4786-1
SDG: 23E-02502

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

Lab Sample ID: LCS 880-55013/2-A
Matrix: Solid
Analysis Batch: 55082

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 55013

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1-Chlorooctane	125		70 - 130
o-Terphenyl	97		70 - 130

Lab Sample ID: LCSD 880-55013/3-A
Matrix: Solid
Analysis Batch: 55082

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 55013

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			1000	946.4		mg/Kg		95	70 - 130	11	20
Diesel Range Organics (Over C10-C28)			1000	931.0		mg/Kg		93	70 - 130	7	20

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
1-Chlorooctane	121		70 - 130
o-Terphenyl	93		70 - 130

Lab Sample ID: 880-29220-A-1-C MS
Matrix: Solid
Analysis Batch: 55082

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 55013

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	1249		mg/Kg		123	70 - 130
Diesel Range Organics (Over C10-C28)	<49.9	U	996	1044		mg/Kg		103	70 - 130

Surrogate	MS %Recovery	MS Qualifier	Limits
1-Chlorooctane	159	S1+	70 - 130
o-Terphenyl	116		70 - 130

Lab Sample ID: 880-29220-A-1-D MSD
Matrix: Solid
Analysis Batch: 55082

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 55013

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	1199		mg/Kg		118	70 - 130	4	20
Diesel Range Organics (Over C10-C28)	<49.9	U	996	972.7		mg/Kg		96	70 - 130	7	20

Surrogate	MSD %Recovery	MSD Qualifier	Limits
1-Chlorooctane	149	S1+	70 - 130
o-Terphenyl	109		70 - 130

QC Sample Results

Client: Vertex
Project/Site: Corral Fly

Job ID: 890-4786-1
SDG: 23E-02502

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-55022/1-A
Matrix: Solid
Analysis Batch: 55120

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			06/09/23 10:37	1

Lab Sample ID: LCS 880-55022/2-A
Matrix: Solid
Analysis Batch: 55120

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride			250	248.0		mg/Kg		99	90 - 110		

Lab Sample ID: LCSD 880-55022/3-A
Matrix: Solid
Analysis Batch: 55120

Client Sample ID: Lab Control Sample Dup
Prep Type: Soluble

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride			250	250.6		mg/Kg		100	90 - 110	1	20

Lab Sample ID: 890-4786-2 MS
Matrix: Solid
Analysis Batch: 55120

Client Sample ID: BH23-08 4'
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride	284		249	538.7		mg/Kg		102	90 - 110		

Lab Sample ID: 890-4786-2 MSD
Matrix: Solid
Analysis Batch: 55120

Client Sample ID: BH23-08 4'
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	284		249	535.5		mg/Kg		101	90 - 110	1	20

QC Association Summary

Client: Vertex
Project/Site: Corral Fly

Job ID: 890-4786-1
SDG: 23E-02502

GC VOA

Prep Batch: 55037

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4786-1	BH23-08 2'	Total/NA	Solid	5035	
890-4786-2	BH23-08 4'	Total/NA	Solid	5035	
890-4786-3	BH23-11 0'	Total/NA	Solid	5035	
890-4786-4	BH23-11 2'	Total/NA	Solid	5035	
890-4786-5	BH23-12 0'	Total/NA	Solid	5035	
890-4786-6	BH23-12 2'	Total/NA	Solid	5035	
MB 880-55037/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-55037/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-55037/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
890-4781-A-1-F MS	Matrix Spike	Total/NA	Solid	5035	
890-4781-A-1-G MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Analysis Batch: 55385

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4786-1	BH23-08 2'	Total/NA	Solid	8021B	55037
890-4786-2	BH23-08 4'	Total/NA	Solid	8021B	55037
890-4786-3	BH23-11 0'	Total/NA	Solid	8021B	55037
890-4786-4	BH23-11 2'	Total/NA	Solid	8021B	55037
890-4786-5	BH23-12 0'	Total/NA	Solid	8021B	55037
890-4786-6	BH23-12 2'	Total/NA	Solid	8021B	55037
MB 880-55037/5-A	Method Blank	Total/NA	Solid	8021B	55037
LCS 880-55037/1-A	Lab Control Sample	Total/NA	Solid	8021B	55037
LCSD 880-55037/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	55037
890-4781-A-1-F MS	Matrix Spike	Total/NA	Solid	8021B	55037
890-4781-A-1-G MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	55037

Analysis Batch: 55493

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4786-1	BH23-08 2'	Total/NA	Solid	Total BTEX	
890-4786-2	BH23-08 4'	Total/NA	Solid	Total BTEX	
890-4786-3	BH23-11 0'	Total/NA	Solid	Total BTEX	
890-4786-4	BH23-11 2'	Total/NA	Solid	Total BTEX	
890-4786-5	BH23-12 0'	Total/NA	Solid	Total BTEX	
890-4786-6	BH23-12 2'	Total/NA	Solid	Total BTEX	

GC Semi VOA

Prep Batch: 55013

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4786-1	BH23-08 2'	Total/NA	Solid	8015NM Prep	
890-4786-2	BH23-08 4'	Total/NA	Solid	8015NM Prep	
890-4786-3	BH23-11 0'	Total/NA	Solid	8015NM Prep	
890-4786-4	BH23-11 2'	Total/NA	Solid	8015NM Prep	
890-4786-5	BH23-12 0'	Total/NA	Solid	8015NM Prep	
890-4786-6	BH23-12 2'	Total/NA	Solid	8015NM Prep	
MB 880-55013/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-55013/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-55013/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
880-29220-A-1-C MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
880-29220-A-1-D MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

QC Association Summary

Client: Vertex
Project/Site: Corral Fly

Job ID: 890-4786-1
SDG: 23E-02502

GC Semi VOA

Analysis Batch: 55082

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4786-1	BH23-08 2'	Total/NA	Solid	8015B NM	55013
890-4786-2	BH23-08 4'	Total/NA	Solid	8015B NM	55013
890-4786-3	BH23-11 0'	Total/NA	Solid	8015B NM	55013
890-4786-4	BH23-11 2'	Total/NA	Solid	8015B NM	55013
890-4786-5	BH23-12 0'	Total/NA	Solid	8015B NM	55013
890-4786-6	BH23-12 2'	Total/NA	Solid	8015B NM	55013
MB 880-55013/1-A	Method Blank	Total/NA	Solid	8015B NM	55013
LCS 880-55013/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	55013
LCSD 880-55013/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	55013
880-29220-A-1-C MS	Matrix Spike	Total/NA	Solid	8015B NM	55013
880-29220-A-1-D MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	55013

Analysis Batch: 55333

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4786-1	BH23-08 2'	Total/NA	Solid	8015 NM	
890-4786-2	BH23-08 4'	Total/NA	Solid	8015 NM	
890-4786-3	BH23-11 0'	Total/NA	Solid	8015 NM	
890-4786-4	BH23-11 2'	Total/NA	Solid	8015 NM	
890-4786-5	BH23-12 0'	Total/NA	Solid	8015 NM	
890-4786-6	BH23-12 2'	Total/NA	Solid	8015 NM	

HPLC/IC

Leach Batch: 55022

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4786-1	BH23-08 2'	Soluble	Solid	DI Leach	
890-4786-2	BH23-08 4'	Soluble	Solid	DI Leach	
890-4786-3	BH23-11 0'	Soluble	Solid	DI Leach	
890-4786-4	BH23-11 2'	Soluble	Solid	DI Leach	
890-4786-5	BH23-12 0'	Soluble	Solid	DI Leach	
890-4786-6	BH23-12 2'	Soluble	Solid	DI Leach	
MB 880-55022/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-55022/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-55022/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-4786-2 MS	BH23-08 4'	Soluble	Solid	DI Leach	
890-4786-2 MSD	BH23-08 4'	Soluble	Solid	DI Leach	

Analysis Batch: 55120

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4786-1	BH23-08 2'	Soluble	Solid	300.0	55022
890-4786-2	BH23-08 4'	Soluble	Solid	300.0	55022
890-4786-3	BH23-11 0'	Soluble	Solid	300.0	55022
890-4786-4	BH23-11 2'	Soluble	Solid	300.0	55022
890-4786-5	BH23-12 0'	Soluble	Solid	300.0	55022
890-4786-6	BH23-12 2'	Soluble	Solid	300.0	55022
MB 880-55022/1-A	Method Blank	Soluble	Solid	300.0	55022
LCS 880-55022/2-A	Lab Control Sample	Soluble	Solid	300.0	55022
LCSD 880-55022/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	55022
890-4786-2 MS	BH23-08 4'	Soluble	Solid	300.0	55022
890-4786-2 MSD	BH23-08 4'	Soluble	Solid	300.0	55022

Lab Chronicle

Client: Vertex
Project/Site: Corral Fly

Job ID: 890-4786-1
SDG: 23E-02502

Client Sample ID: BH23-08 2'

Lab Sample ID: 890-4786-1
Matrix: Solid
Date Collected: 06/06/23 09:00
Date Received: 06/06/23 14:29

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	55037	06/08/23 13:04	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	55385	06/13/23 19:49	AJ	EET MID
Total/NA	Analysis	Total BTEX		1			55493	06/14/23 09:58	AJ	EET MID
Total/NA	Analysis	8015 NM		1			55333	06/12/23 14:13	AJ	EET MID
Total/NA	Prep	8015NM Prep			10.04 g	10 mL	55013	06/08/23 09:14	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	55082	06/10/23 03:49	AJ	EET MID
Soluble	Leach	DI Leach			5.01 g	50 mL	55022	06/08/23 09:45	KS	EET MID
Soluble	Analysis	300.0		1			55120	06/09/23 12:05	CH	EET MID

Client Sample ID: BH23-08 4'

Lab Sample ID: 890-4786-2
Matrix: Solid
Date Collected: 06/06/23 09:05
Date Received: 06/06/23 14:29

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	55037	06/08/23 13:04	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	55385	06/13/23 20:09	AJ	EET MID
Total/NA	Analysis	Total BTEX		1			55493	06/14/23 09:58	AJ	EET MID
Total/NA	Analysis	8015 NM		1			55333	06/12/23 14:13	AJ	EET MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	55013	06/08/23 09:14	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	55082	06/10/23 04:11	AJ	EET MID
Soluble	Leach	DI Leach			5.02 g	50 mL	55022	06/08/23 09:45	KS	EET MID
Soluble	Analysis	300.0		1			55120	06/09/23 12:10	CH	EET MID

Client Sample ID: BH23-11 0'

Lab Sample ID: 890-4786-3
Matrix: Solid
Date Collected: 06/06/23 09:10
Date Received: 06/06/23 14:29

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	55037	06/08/23 13:04	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	55385	06/13/23 20:29	AJ	EET MID
Total/NA	Analysis	Total BTEX		1			55493	06/14/23 09:58	AJ	EET MID
Total/NA	Analysis	8015 NM		1			55333	06/12/23 14:13	AJ	EET MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	55013	06/08/23 09:14	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	55082	06/10/23 04:33	AJ	EET MID
Soluble	Leach	DI Leach			5 g	50 mL	55022	06/08/23 09:45	KS	EET MID
Soluble	Analysis	300.0		5			55120	06/09/23 12:27	CH	EET MID

Client Sample ID: BH23-11 2'

Lab Sample ID: 890-4786-4
Matrix: Solid
Date Collected: 06/06/23 09:15
Date Received: 06/06/23 14:29

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	55037	06/08/23 13:04	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	55385	06/13/23 20:50	AJ	EET MID
Total/NA	Analysis	Total BTEX		1			55493	06/14/23 09:58	AJ	EET MID

Eurofins Carlsbad

Lab Chronicle

Client: Vertex
Project/Site: Corral Fly

Job ID: 890-4786-1
SDG: 23E-02502

Client Sample ID: BH23-11 2'

Lab Sample ID: 890-4786-4
Matrix: Solid
Date Collected: 06/06/23 09:15
Date Received: 06/06/23 14:29

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			55333	06/12/23 14:13	AJ	EET MID
Total/NA	Prep	8015NM Prep			10.00 g	10 mL	55013	06/08/23 09:14	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	55082	06/10/23 04:55	AJ	EET MID
Soluble	Leach	DI Leach			5.05 g	50 mL	55022	06/08/23 09:45	KS	EET MID
Soluble	Analysis	300.0		5			55120	06/09/23 12:32	CH	EET MID

Client Sample ID: BH23-12 0'

Lab Sample ID: 890-4786-5
Matrix: Solid
Date Collected: 06/06/23 09:20
Date Received: 06/06/23 14:29

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.95 g	5 mL	55037	06/08/23 13:04	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	55385	06/13/23 21:10	AJ	EET MID
Total/NA	Analysis	Total BTEX		1			55493	06/14/23 09:58	AJ	EET MID
Total/NA	Analysis	8015 NM		1			55333	06/12/23 14:13	AJ	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	55013	06/08/23 09:14	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	55082	06/10/23 05:17	AJ	EET MID
Soluble	Leach	DI Leach			5.02 g	50 mL	55022	06/08/23 09:45	KS	EET MID
Soluble	Analysis	300.0		20			55120	06/09/23 12:49	CH	EET MID

Client Sample ID: BH23-12 2'

Lab Sample ID: 890-4786-6
Matrix: Solid
Date Collected: 06/06/23 09:25
Date Received: 06/06/23 14:29

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	55037	06/08/23 13:04	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	55385	06/13/23 21:31	AJ	EET MID
Total/NA	Analysis	Total BTEX		1			55493	06/14/23 09:58	AJ	EET MID
Total/NA	Analysis	8015 NM		1			55333	06/12/23 14:13	AJ	EET MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	55013	06/08/23 09:14	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	55082	06/10/23 05:38	AJ	EET MID
Soluble	Leach	DI Leach			5.05 g	50 mL	55022	06/08/23 09:45	KS	EET MID
Soluble	Analysis	300.0		20			55120	06/09/23 12:55	CH	EET MID

Laboratory References:

EET MID = Eurofins Midland, 1211 W. Florida Ave, Midland, TX 79701, TEL (432)704-5440

Accreditation/Certification Summary

Client: Vertex
Project/Site: Corral Fly

Job ID: 890-4786-1
SDG: 23E-02502

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	T104704400-22-25	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: Vertex
Project/Site: Corral Fly

Job ID: 890-4786-1
SDG: 23E-02502

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	EPA	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

EPA = US Environmental Protection Agency

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: Vertex
Project/Site: Corral Fly

Job ID: 890-4786-1
SDG: 23E-02502

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
890-4786-1	BH23-08 2'	Solid	06/06/23 09:00	06/06/23 14:29
890-4786-2	BH23-08 4'	Solid	06/06/23 09:05	06/06/23 14:29
890-4786-3	BH23-11 0'	Solid	06/06/23 09:10	06/06/23 14:29
890-4786-4	BH23-11 2'	Solid	06/06/23 09:15	06/06/23 14:29
890-4786-5	BH23-12 0'	Solid	06/06/23 09:20	06/06/23 14:29
890-4786-6	BH23-12 2'	Solid	06/06/23 09:25	06/06/23 14:29

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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: _____

www.xenco.com Page _____ of _____

Project Manager:	Chance Dixon	Bill to: (if different)	Rob Kirk
Company Name:	Vertex	Company Name:	Solaris
Address:		Address:	
City, State ZIP:		City, State ZIP:	
Phone:	Email:	cdixon@vertex.ca	analytical@vertex.ca

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:	Corral Fly	Turn Around	☒ Routine ☐ Rush
Project Number:	23E-02502		
Project Location:		Due Date:	
Sampler's Name:	Hunter Klein	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:		TAM-007	
Cooler Custody Seals:	Yes No (N/A)	Correction Factor:		-0.2	
Sample Custody Seals:	Yes No (N/A)	Temperature Reading:		10.6	
Total Containers:		Corrected Temperature:		10.4	

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

ANALYSIS REQUEST

Pres. Code | Parameters: TPH | BTEX | U

Sample Identification		Matrix	Date Sampled	Time Sampled	Depth	Grab/Comp	# of Cont	TPH	BTEX	U	Sample Comments
BH23-08	2'	Soil	6/6/23	9:00				X	X	X	
BH23-08	4'			9:05				X	X	X	
BH23-11	0'			9:10				X	X	X	
BH23-11	2'			9:15				X	X	X	
BH23-12	0'			9:20				X	X	X	
BH23-12	2'			9:25				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

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 Hunter Klein	Amanda Stuff	6/16/23 1429	2		
3			4		
5			6		

Revised Date: 08/25/2020 Rev. 2020.2

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Received by OCD: 7/24/2024 3:24:20 PM

Released to Imaging: 7/26/2024 3:59:45 PM

Login Sample Receipt Checklist

Client: Vertex

Job Number: 890-4786-1
SDG Number: 23E-02502

Login Number: 4786
List Number: 1
Creator: Stutzman, Amanda

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: Vertex

Job Number: 890-4786-1
SDG Number: 23E-02502

Login Number: 4786
List Number: 2
Creator: Rodriguez, Leticia

List Source: Eurofins Midland
List Creation: 06/08/23 10:12 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	

eurofins | Environment Testing

ANALYTICAL REPORT

PREPARED FOR

Attn: Chance Dixon
Vertex
3101 Boyd Dr
Carlsbad, New Mexico 88220

Generated 6/19/2023 3:25:42 PM

JOB DESCRIPTION

Corral Fly
SDG NUMBER 23E-02502

JOB NUMBER

890-4814-1

Eurofins Carlsbad
1089 N Canal St.
Carlsbad NM 88220

See page two for job notes and contact information.

Released to Imaging: 7/26/2024 3:39:45 PM

my EOL

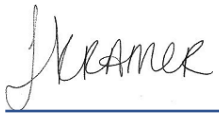
Eurofins Carlsbad

Job Notes

This report may not be reproduced except in full, and with written approval from the laboratory. The results relate only to the samples tested. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

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



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Authorized for release by
Jessica Kramer, Project Manager
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Client: Vertex
Project/Site: Corral Fly

Laboratory Job ID: 890-4814-1
SDG: 23E-02502

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Definitions/Glossary

Client: Vertex
Project/Site: Corral Fly

Job ID: 890-4814-1
SDG: 23E-02502

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
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: Vertex
Project/Site: Corral Fly

Job ID: 890-4814-1
SDG: 23E-02502

Job ID: 890-4814-1

Laboratory: Eurofins Carlsbad

Narrative

Job Narrative
890-4814-1

Receipt
The samples were received on 6/12/2023 3:19 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

Receipt Exceptions
The following samples were received and analyzed from an unpreserved bulk soil jar: BH23-13 0' (890-4814-1), BH23-13 2' (890-4814-2), BH23-14 0' (890-4814-3) and BH23-14 2' (890-4814-4).

GC VOA
Method 8021B: The surrogate recovery for the blank associated with preparation batch 880-55677 and 880-55680 and analytical batch 880-55652 was outside the control limits.

Method 8021B: Surrogate recovery for the following sample was outside control limits: (LCS 880-55677/1-A). Evidence of matrix interferences is not obvious.

Method 8021B: The continuing calibration verification (CCV) associated with batch 880-55652 recovered below the lower control limit for Benzene, Ethylbenzene, Toluene, m-Xylene & p-Xylene and o-Xylene. An acceptable CCV was ran within the 12 hour window, therefore the data has been qualified and reported. The associated sample is impacted: (CCV 880-55652/95).

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: Vertex
Project/Site: Corral Fly

Job ID: 890-4814-1
SDG: 23E-02502

Client Sample ID: BH23-13 0'

Lab Sample ID: 890-4814-1
Matrix: Solid
Date Collected: 06/12/23 10:00
Date Received: 06/12/23 15:19

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		06/16/23 10:43	06/17/23 14:39	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		06/16/23 10:43	06/17/23 14:39	1
Toluene	<0.00200	U	0.00200		mg/Kg		06/16/23 10:43	06/17/23 14:39	1
Xylenes, Total	<0.00401	U	0.00401		mg/Kg		06/16/23 10:43	06/17/23 14:39	1
m-Xylene & p-Xylene	<0.00401	U	0.00401		mg/Kg		06/16/23 10:43	06/17/23 14:39	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		06/16/23 10:43	06/17/23 14:39	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*82*		*70 - 130*	*06/16/23 10:43*	*06/17/23 14:39*	*1*
1,4-Difluorobenzene (Surr)	*94*		*70 - 130*	*06/16/23 10:43*	*06/17/23 14:39*	*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			06/19/23 15:52	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			06/15/23 12:35	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		06/14/23 11:36	06/14/23 18:40	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		06/14/23 11:36	06/14/23 18:40	1
OII Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		06/14/23 11:36	06/14/23 18:40	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*111*		*70 - 130*	*06/14/23 11:36*	*06/14/23 18:40*	*1*
o-Terphenyl	*92*		*70 - 130*	*06/14/23 11:36*	*06/14/23 18:40*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	123		5.05		mg/Kg			06/14/23 13:41	1

Client Sample ID: BH23-13 2'

Lab Sample ID: 890-4814-2
Matrix: Solid
Date Collected: 06/12/23 10:05
Date Received: 06/12/23 15:19

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		06/16/23 10:43	06/17/23 15:00	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		06/16/23 10:43	06/17/23 15:00	1
Toluene	<0.00200	U	0.00200		mg/Kg		06/16/23 10:43	06/17/23 15:00	1
Xylenes, Total	<0.00399	U	0.00399		mg/Kg		06/16/23 10:43	06/17/23 15:00	1
m-Xylene & p-Xylene	<0.00399	U	0.00399		mg/Kg		06/16/23 10:43	06/17/23 15:00	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		06/16/23 10:43	06/17/23 15:00	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*86*		*70 - 130*	*06/16/23 10:43*	*06/17/23 15:00*	*1*
1,4-Difluorobenzene (Surr)	*80*		*70 - 130*	*06/16/23 10:43*	*06/17/23 15:00*	*1*

Client Sample Results

Client: Vertex
Project/Site: Corral Fly

Job ID: 890-4814-1
SDG: 23E-02502

Client Sample ID: BH23-13 2'

Date Collected: 06/12/23 10:05
Date Received: 06/12/23 15:19

Lab Sample ID: 890-4814-2
Matrix: Solid

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			06/19/23 15:52	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			06/15/23 12:35	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		06/14/23 11:36	06/14/23 19:02	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		06/14/23 11:36	06/14/23 19:02	1
OII Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		06/14/23 11:36	06/14/23 19:02	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*130*		*70 - 130*	*06/14/23 11:36*	*06/14/23 19:02*	*1*
o-Terphenyl	*103*		*70 - 130*	*06/14/23 11:36*	*06/14/23 19:02*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**43.2**		4.98		mg/Kg			06/14/23 13:46	1

Client Sample ID: BH23-14 0'

Date Collected: 06/12/23 10:10
Date Received: 06/12/23 15:19

Lab Sample ID: 890-4814-3
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		06/16/23 10:43	06/17/23 15:21	1
Ethylbenzene	<0.00202	U	0.00202		mg/Kg		06/16/23 10:43	06/17/23 15:21	1
Toluene	<0.00202	U	0.00202		mg/Kg		06/16/23 10:43	06/17/23 15:21	1
Xylenes, Total	<0.00404	U	0.00404		mg/Kg		06/16/23 10:43	06/17/23 15:21	1
m-Xylene & p-Xylene	<0.00404	U	0.00404		mg/Kg		06/16/23 10:43	06/17/23 15:21	1
o-Xylene	<0.00202	U	0.00202		mg/Kg		06/16/23 10:43	06/17/23 15:21	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*89*		*70 - 130*	*06/16/23 10:43*	*06/17/23 15:21*	*1*
1,4-Difluorobenzene (Surr)	*90*		*70 - 130*	*06/16/23 10:43*	*06/17/23 15:21*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00404	U	0.00404		mg/Kg			06/19/23 15:52	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			06/15/23 12:35	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		06/14/23 11:36	06/14/23 19:25	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		06/14/23 11:36	06/14/23 19:25	1

Client Sample Results

Client: Vertex
Project/Site: Corral Fly

Job ID: 890-4814-1
SDG: 23E-02502

Client Sample ID: BH23-14 0'

Date Collected: 06/12/23 10:10
Date Received: 06/12/23 15:19

Lab Sample ID: 890-4814-3
Matrix: Solid

Method: SW846 8015B NM - Diesel Range Organics (DRO) (GC) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		06/14/23 11:36	06/14/23 19:25	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*111*		*70 - 130*	*06/14/23 11:36*	*06/14/23 19:25*	*1*
o-Terphenyl	*92*		*70 - 130*	*06/14/23 11:36*	*06/14/23 19:25*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**71.6**		5.03		mg/Kg			06/14/23 13:52	1

Client Sample ID: BH23-14 2'

Date Collected: 06/12/23 10:15
Date Received: 06/12/23 15:19

Lab Sample ID: 890-4814-4
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		06/16/23 10:43	06/17/23 15:41	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		06/16/23 10:43	06/17/23 15:41	1
Toluene	<0.00199	U	0.00199		mg/Kg		06/16/23 10:43	06/17/23 15:41	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		06/16/23 10:43	06/17/23 15:41	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		06/16/23 10:43	06/17/23 15:41	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		06/16/23 10:43	06/17/23 15:41	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*91*		*70 - 130*	*06/16/23 10:43*	*06/17/23 15:41*	*1*
1,4-Difluorobenzene (Surr)	*96*		*70 - 130*	*06/16/23 10:43*	*06/17/23 15:41*	*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			06/19/23 15:52	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			06/15/23 12:35	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		06/14/23 11:36	06/14/23 19:48	1
Diesel Range Organics (Over C10-C28)	<49.8	U	49.8		mg/Kg		06/14/23 11:36	06/14/23 19:48	1
OII Range Organics (Over C28-C36)	<49.8	U	49.8		mg/Kg		06/14/23 11:36	06/14/23 19:48	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*129*		*70 - 130*	*06/14/23 11:36*	*06/14/23 19:48*	*1*
o-Terphenyl	*103*		*70 - 130*	*06/14/23 11:36*	*06/14/23 19:48*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**50.6**		5.01		mg/Kg			06/14/23 14:09	1

Surrogate Summary

Client: Vertex
Project/Site: Corral Fly

Job ID: 890-4814-1
SDG: 23E-02502

Method: 8021B - Volatile Organic Compounds (GC)

Matrix: Solid **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)											
		BFB1	DFBZ1										
Lab Sample ID	Client Sample ID	(70-130)	(70-130)										
880-29314-A-1-B MS	Matrix Spike	102	108										
880-29314-A-1-C MSD	Matrix Spike Duplicate	106	107										
890-4814-1	BH23-13 0'	82	94										
890-4814-2	BH23-13 2'	86	80										
890-4814-3	BH23-14 0'	89	90										
890-4814-4	BH23-14 2'	91	96										
LCS 880-55677/1-A	Lab Control Sample	137 S1+	110										
LCSD 880-55677/2-A	Lab Control Sample Dup	115	106										
MB 880-55677/5-A	Method Blank	67 S1-	99										
MB 880-55680/5-A	Method Blank	69 S1-	99										

Surrogate Legend

BFB = 4-Bromofluorobenzene (Surr)
DFBZ = 1,4-Difluorobenzene (Surr)

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

Matrix: Solid **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)											
		1CO1	OTPH1										
Lab Sample ID	Client Sample ID	(70-130)	(70-130)										
880-29502-A-21-C MS	Matrix Spike	115	83										
880-29502-A-21-D MSD	Matrix Spike Duplicate	116	86										
890-4814-1	BH23-13 0'	111	92										
890-4814-2	BH23-13 2'	130	103										
890-4814-3	BH23-14 0'	111	92										
890-4814-4	BH23-14 2'	129	103										
LCS 880-55508/2-A	Lab Control Sample	123	106										
LCSD 880-55508/3-A	Lab Control Sample Dup	104	88										
MB 880-55508/1-A	Method Blank	61 S1-	52 S1-										

Surrogate Legend

1CO = 1-Chlorooctane
OTPH = o-Terphenyl

QC Sample Results

Client: Vertex
Project/Site: Corral Fly

Job ID: 890-4814-1
SDG: 23E-02502

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-55677/5-A
Matrix: Solid
Analysis Batch: 55652

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 55677

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		06/16/23 10:43	06/17/23 09:26	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		06/16/23 10:43	06/17/23 09:26	1
Toluene	<0.00200	U	0.00200		mg/Kg		06/16/23 10:43	06/17/23 09:26	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		06/16/23 10:43	06/17/23 09:26	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		06/16/23 10:43	06/17/23 09:26	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		06/16/23 10:43	06/17/23 09:26	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*67*	*S1-*	*70 - 130*	*06/16/23 10:43*	*06/17/23 09:26*	*1*
1,4-Difluorobenzene (Surr)	*99*		*70 - 130*	*06/16/23 10:43*	*06/17/23 09:26*	*1*

Lab Sample ID: LCS 880-55677/1-A
Matrix: Solid
Analysis Batch: 55652

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 55677

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene			0.100	0.09597		mg/Kg		96	70 - 130		
Ethylbenzene			0.100	0.08456		mg/Kg		85	70 - 130		
Toluene			0.100	0.08390		mg/Kg		84	70 - 130		
m-Xylene & p-Xylene			0.200	0.1708		mg/Kg		85	70 - 130		
o-Xylene			0.100	0.08842		mg/Kg		88	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*137*	*S1+*	*70 - 130*
1,4-Difluorobenzene (Surr)	*110*		*70 - 130*

Lab Sample ID: LCSD 880-55677/2-A
Matrix: Solid
Analysis Batch: 55652

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 55677

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene			0.100	0.09332		mg/Kg		93	70 - 130	3	35
Ethylbenzene			0.100	0.07964		mg/Kg		80	70 - 130	6	35
Toluene			0.100	0.08119		mg/Kg		81	70 - 130	3	35
m-Xylene & p-Xylene			0.200	0.1616		mg/Kg		81	70 - 130	6	35
o-Xylene			0.100	0.08321		mg/Kg		83	70 - 130	6	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*115*		*70 - 130*
1,4-Difluorobenzene (Surr)	*106*		*70 - 130*

Lab Sample ID: 880-29314-A-1-B MS
Matrix: Solid
Analysis Batch: 55652

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 55677

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene	<0.00200	U	0.0994	0.09585		mg/Kg		96	70 - 130		
Ethylbenzene	<0.00200	U	0.0994	0.08588		mg/Kg		86	70 - 130		

QC Sample Results

Client: Vertex
Project/Site: Corral Fly

Job ID: 890-4814-1
SDG: 23E-02502

Method: 8021B - Volatile Organic Compounds (GC) (Continued)

Lab Sample ID: 880-29314-A-1-B MS — **Client Sample ID: Matrix Spike**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 55652 — **Prep Batch: 55677**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Toluene	<0.00200	U	0.0994	0.08046		mg/Kg		80	70 - 130
m-Xylene & p-Xylene	<0.00401	U	0.199	0.1636		mg/Kg		82	70 - 130
o-Xylene	<0.00200	U	0.0994	0.08641		mg/Kg		87	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*102*		*70 - 130*
1,4-Difluorobenzene (Surr)	*108*		*70 - 130*

Lab Sample ID: 880-29314-A-1-C MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 55652 — **Prep Batch: 55677**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	<0.00200	U	0.0998	0.09425		mg/Kg		94	70 - 130	2	35
Ethylbenzene	<0.00200	U	0.0998	0.08649		mg/Kg		87	70 - 130	1	35
Toluene	<0.00200	U	0.0998	0.08280		mg/Kg		82	70 - 130	3	35
m-Xylene & p-Xylene	<0.00401	U	0.200	0.1697		mg/Kg		85	70 - 130	4	35
o-Xylene	<0.00200	U	0.0998	0.08586		mg/Kg		86	70 - 130	1	35

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*106*		*70 - 130*
1,4-Difluorobenzene (Surr)	*107*		*70 - 130*

Lab Sample ID: MB 880-55680/5-A — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 55652 — **Prep Batch: 55680**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		06/16/23 11:48	06/16/23 22:47	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		06/16/23 11:48	06/16/23 22:47	1
Toluene	<0.00200	U	0.00200		mg/Kg		06/16/23 11:48	06/16/23 22:47	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		06/16/23 11:48	06/16/23 22:47	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		06/16/23 11:48	06/16/23 22:47	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		06/16/23 11:48	06/16/23 22:47	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*69*	*S1-*	*70 - 130*	*06/16/23 11:48*	*06/16/23 22:47*	*1*
1,4-Difluorobenzene (Surr)	*99*		*70 - 130*	*06/16/23 11:48*	*06/16/23 22:47*	*1*

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

Lab Sample ID: MB 880-55508/1-A — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 55457 — **Prep Batch: 55508**

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		06/14/23 11:36	06/14/23 08:05	1

QC Sample Results

Client: Vertex
Project/Site: Corral Fly

Job ID: 890-4814-1
SDG: 23E-02502

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

Lab Sample ID: MB 880-55508/1-A
Matrix: Solid
Analysis Batch: 55457

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 55508

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		06/14/23 11:36	06/14/23 08:05	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		06/14/23 11:36	06/14/23 08:05	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*61*	*S1-*	*70 - 130*	*06/14/23 11:36*	*06/14/23 08:05*	*1*
o-Terphenyl	*52*	*S1-*	*70 - 130*	*06/14/23 11:36*	*06/14/23 08:05*	*1*

Lab Sample ID: LCS 880-55508/2-A
Matrix: Solid
Analysis Batch: 55457

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 55508

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics (GRO)-C6-C10	1000	842.2		mg/Kg		84	70 - 130
Diesel Range Organics (Over C10-C28)	1000	942.0		mg/Kg		94	70 - 130

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1-Chlorooctane	*123*		*70 - 130*
o-Terphenyl	*106*		*70 - 130*

Lab Sample ID: LCSD 880-55508/3-A
Matrix: Solid
Analysis Batch: 55457

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 55508

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	1000	777.4		mg/Kg		78	70 - 130	8	20
Diesel Range Organics (Over C10-C28)	1000	851.6		mg/Kg		85	70 - 130	10	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1-Chlorooctane	*104*		*70 - 130*
o-Terphenyl	*88*		*70 - 130*

Lab Sample ID: 880-29502-A-21-C MS
Matrix: Solid
Analysis Batch: 55457

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 55508

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics (GRO)-C6-C10	<50.0	U F1	997	1706	F1	mg/Kg		169	70 - 130
Diesel Range Organics (Over C10-C28)	<50.0	U F1	997	1634	F1	mg/Kg		161	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
1-Chlorooctane	*115*		*70 - 130*
o-Terphenyl	*83*		*70 - 130*

QC Sample Results

Client: Vertex
Project/Site: Corral Fly

Job ID: 890-4814-1
SDG: 23E-02502

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

Lab Sample ID: 880-29502-A-21-D MSD
Matrix: Solid
Analysis Batch: 55457

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 55508

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	<50.0	U F1	997	1707	F1	mg/Kg		169	70 - 130	0	20
Diesel Range Organics (Over C10-C28)	<50.0	U F1	997	1690	F1	mg/Kg		167	70 - 130	3	20

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
1-Chlorooctane	*116*		*70 - 130*
o-Terphenyl	*86*		*70 - 130*

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-55470/1-A
Matrix: Solid
Analysis Batch: 55510

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			06/14/23 12:16	1

Lab Sample ID: LCS 880-55470/2-A
Matrix: Solid
Analysis Batch: 55510

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	250	250.4		mg/Kg		100	90 - 110

Lab Sample ID: LCSD 880-55470/3-A
Matrix: Solid
Analysis Batch: 55510

Client Sample ID: Lab Control Sample Dup
Prep Type: Soluble

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	250	250.4		mg/Kg		100	90 - 110	0	20

Lab Sample ID: 890-4814-3 MS
Matrix: Solid
Analysis Batch: 55510

Client Sample ID: BH23-14 0'
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	71.6		252	302.4		mg/Kg		92	90 - 110

Lab Sample ID: 890-4814-3 MSD
Matrix: Solid
Analysis Batch: 55510

Client Sample ID: BH23-14 0'
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	71.6		252	302.5		mg/Kg		92	90 - 110	0	20

QC Association Summary

Client: Vertex
Project/Site: Corral Fly

Job ID: 890-4814-1
SDG: 23E-02502

GC VOA

Analysis Batch: 55652

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4814-1	BH23-13 0'	Total/NA	Solid	8021B	55677
890-4814-2	BH23-13 2'	Total/NA	Solid	8021B	55677
890-4814-3	BH23-14 0'	Total/NA	Solid	8021B	55677
890-4814-4	BH23-14 2'	Total/NA	Solid	8021B	55677
MB 880-55677/5-A	Method Blank	Total/NA	Solid	8021B	55677
MB 880-55680/5-A	Method Blank	Total/NA	Solid	8021B	55680
LCS 880-55677/1-A	Lab Control Sample	Total/NA	Solid	8021B	55677
LCSD 880-55677/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	55677
880-29314-A-1-B MS	Matrix Spike	Total/NA	Solid	8021B	55677
880-29314-A-1-C MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	55677

Prep Batch: 55677

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4814-1	BH23-13 0'	Total/NA	Solid	5035	
890-4814-2	BH23-13 2'	Total/NA	Solid	5035	
890-4814-3	BH23-14 0'	Total/NA	Solid	5035	
890-4814-4	BH23-14 2'	Total/NA	Solid	5035	
MB 880-55677/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-55677/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-55677/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
880-29314-A-1-B MS	Matrix Spike	Total/NA	Solid	5035	
880-29314-A-1-C MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Prep Batch: 55680

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-55680/5-A	Method Blank	Total/NA	Solid	5035	

Analysis Batch: 55869

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4814-1	BH23-13 0'	Total/NA	Solid	Total BTEX	
890-4814-2	BH23-13 2'	Total/NA	Solid	Total BTEX	
890-4814-3	BH23-14 0'	Total/NA	Solid	Total BTEX	
890-4814-4	BH23-14 2'	Total/NA	Solid	Total BTEX	

GC Semi VOA

Analysis Batch: 55457

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4814-1	BH23-13 0'	Total/NA	Solid	8015B NM	55508
890-4814-2	BH23-13 2'	Total/NA	Solid	8015B NM	55508
890-4814-3	BH23-14 0'	Total/NA	Solid	8015B NM	55508
890-4814-4	BH23-14 2'	Total/NA	Solid	8015B NM	55508
MB 880-55508/1-A	Method Blank	Total/NA	Solid	8015B NM	55508
LCS 880-55508/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	55508
LCSD 880-55508/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	55508
880-29502-A-21-C MS	Matrix Spike	Total/NA	Solid	8015B NM	55508
880-29502-A-21-D MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	55508

Prep Batch: 55508

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4814-1	BH23-13 0'	Total/NA	Solid	8015NM Prep	

QC Association Summary

Client: Vertex
Project/Site: Corral Fly

Job ID: 890-4814-1
SDG: 23E-02502

GC Semi VOA (Continued)

Prep Batch: 55508 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4814-2	BH23-13 2'	Total/NA	Solid	8015NM Prep	
890-4814-3	BH23-14 0'	Total/NA	Solid	8015NM Prep	
890-4814-4	BH23-14 2'	Total/NA	Solid	8015NM Prep	
MB 880-55508/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-55508/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-55508/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
880-29502-A-21-C MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
880-29502-A-21-D MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

Analysis Batch: 55603

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4814-1	BH23-13 0'	Total/NA	Solid	8015 NM	
890-4814-2	BH23-13 2'	Total/NA	Solid	8015 NM	
890-4814-3	BH23-14 0'	Total/NA	Solid	8015 NM	
890-4814-4	BH23-14 2'	Total/NA	Solid	8015 NM	

HPLC/IC

Leach Batch: 55470

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4814-1	BH23-13 0'	Soluble	Solid	DI Leach	
890-4814-2	BH23-13 2'	Soluble	Solid	DI Leach	
890-4814-3	BH23-14 0'	Soluble	Solid	DI Leach	
890-4814-4	BH23-14 2'	Soluble	Solid	DI Leach	
MB 880-55470/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-55470/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-55470/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-4814-3 MS	BH23-14 0'	Soluble	Solid	DI Leach	
890-4814-3 MSD	BH23-14 0'	Soluble	Solid	DI Leach	

Analysis Batch: 55510

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4814-1	BH23-13 0'	Soluble	Solid	300.0	55470
890-4814-2	BH23-13 2'	Soluble	Solid	300.0	55470
890-4814-3	BH23-14 0'	Soluble	Solid	300.0	55470
890-4814-4	BH23-14 2'	Soluble	Solid	300.0	55470
MB 880-55470/1-A	Method Blank	Soluble	Solid	300.0	55470
LCS 880-55470/2-A	Lab Control Sample	Soluble	Solid	300.0	55470
LCSD 880-55470/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	55470
890-4814-3 MS	BH23-14 0'	Soluble	Solid	300.0	55470
890-4814-3 MSD	BH23-14 0'	Soluble	Solid	300.0	55470

Lab Chronicle

Client: Vertex
Project/Site: Corral Fly

Job ID: 890-4814-1
SDG: 23E-02502

Client Sample ID: BH23-13 0'

Lab Sample ID: 890-4814-1
Matrix: Solid
Date Collected: 06/12/23 10:00
Date Received: 06/12/23 15:19

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	55677	06/16/23 10:43	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	55652	06/17/23 14:39	SM	EET MID
Total/NA	Analysis	Total BTEX		1			55869	06/19/23 15:52	SM	EET MID
Total/NA	Analysis	8015 NM		1			55603	06/15/23 12:35	AJ	EET MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	55508	06/14/23 11:36	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	55457	06/14/23 18:40	AJ	EET MID
Soluble	Leach	DI Leach			4.95 g	50 mL	55470	06/14/23 11:00	KS	EET MID
Soluble	Analysis	300.0		1			55510	06/14/23 13:41	CH	EET MID

Client Sample ID: BH23-13 2'

Lab Sample ID: 890-4814-2
Matrix: Solid
Date Collected: 06/12/23 10:05
Date Received: 06/12/23 15:19

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	55677	06/16/23 10:43	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	55652	06/17/23 15:00	SM	EET MID
Total/NA	Analysis	Total BTEX		1			55869	06/19/23 15:52	SM	EET MID
Total/NA	Analysis	8015 NM		1			55603	06/15/23 12:35	AJ	EET MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	55508	06/14/23 11:36	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	55457	06/14/23 19:02	AJ	EET MID
Soluble	Leach	DI Leach			5.02 g	50 mL	55470	06/14/23 11:00	KS	EET MID
Soluble	Analysis	300.0		1			55510	06/14/23 13:46	CH	EET MID

Client Sample ID: BH23-14 0'

Lab Sample ID: 890-4814-3
Matrix: Solid
Date Collected: 06/12/23 10:10
Date Received: 06/12/23 15:19

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.95 g	5 mL	55677	06/16/23 10:43	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	55652	06/17/23 15:21	SM	EET MID
Total/NA	Analysis	Total BTEX		1			55869	06/19/23 15:52	SM	EET MID
Total/NA	Analysis	8015 NM		1			55603	06/15/23 12:35	AJ	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	55508	06/14/23 11:36	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	55457	06/14/23 19:25	AJ	EET MID
Soluble	Leach	DI Leach			4.97 g	50 mL	55470	06/14/23 11:00	KS	EET MID
Soluble	Analysis	300.0		1			55510	06/14/23 13:52	CH	EET MID

Client Sample ID: BH23-14 2'

Lab Sample ID: 890-4814-4
Matrix: Solid
Date Collected: 06/12/23 10:15
Date Received: 06/12/23 15:19

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	55677	06/16/23 10:43	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	55652	06/17/23 15:41	SM	EET MID
Total/NA	Analysis	Total BTEX		1			55869	06/19/23 15:52	SM	EET MID

Eurofins Carlsbad

Lab Chronicle

Client: Vertex
Project/Site: Corral Fly

Job ID: 890-4814-1
SDG: 23E-02502

Client Sample ID: BH23-14 2'

Date Collected: 06/12/23 10:15
Date Received: 06/12/23 15:19

Lab Sample ID: 890-4814-4

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8015 NM		1			55603	06/15/23 12:35	AJ	EET MID
Total/NA	Prep	8015NM Prep			10.05 g	10 mL	55508	06/14/23 11:36	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	55457	06/14/23 19:48	AJ	EET MID
Soluble	Leach	DI Leach			4.99 g	50 mL	55470	06/14/23 11:00	KS	EET MID
Soluble	Analysis	300.0		1			55510	06/14/23 14:09	CH	EET MID

Laboratory References:

EET MID = Eurofins Midland, 1211 W. Florida Ave, Midland, TX 79701, TEL (432)704-5440

Accreditation/Certification Summary

Client: Vertex
Project/Site: Corral Fly

Job ID: 890-4814-1
SDG: 23E-02502

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	T104704400-22-25	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: Vertex
Project/Site: Corral Fly

Job ID: 890-4814-1
SDG: 23E-02502

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	EPA	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

EPA = US Environmental Protection Agency

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: Vertex
Project/Site: Corral Fly

Job ID: 890-4814-1
SDG: 23E-02502

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
890-4814-1	BH23-13 0'	Solid	06/12/23 10:00	06/12/23 15:19
890-4814-2	BH23-13 2'	Solid	06/12/23 10:05	06/12/23 15:19
890-4814-3	BH23-14 0'	Solid	06/12/23 10:10	06/12/23 15:19
890-4814-4	BH23-14 2'	Solid	06/12/23 10:15	06/12/23 15:19

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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: _____

www.xenco.com Page _____ of _____

Project Manager:	Chance Dixon	Bill to: (if different)	Rob Kirk
Company Name:	Vertex	Company Name:	
Address:		Address:	
City, State ZIP:		City, State ZIP:	
Phone:	Email:	cdixon@vertex.ca	analytical@vertex.ca

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:	Corral Fly	Turn Around	
Project Number:	23E-02502	☒ Routine ☐ Rush	
Project Location:		Due Date:	
Sampler's Name:	Hunter Klein	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:	IR-07	
Cooler Custody Seals:	Yes No (N/A)	Correction Factor:	-0.2	
Sample Custody Seals:	Yes No (N/A)	Temperature Reading:	2.3	
Total Containers:		Corrected Temperature:	2.1	

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

ANALYSIS REQUEST

890-4814 Chain of Custody

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Grab/Comp	# of Cont	TPH	BTEX	Cl	Sample Comments
BH23-13 0'	Soil	6/12/23	10:00				x	x	x	
BH23-13 2'			10:05				x	x	x	
BH23-14 0'			10:10				x	x	x	
BH23-14 2'			10:15				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

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 Hunter Klein	Amanda Stag	6/12/23 1519	2		
3			4		
5			6		

Revised Date: 08/25/2020 Rev. 2020.2

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Received by OCD: 7/24/2024 3:24:20 PM

Released to Imaging: 7/26/2024 3:59:45 PM

Eurofins Carlsbad
1089 N Canal St.
Carlsbad, NM 88220
Phone 575-988-3199 Fax: 575-988-3199

Chain of Custody Record

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Client Information (Sub Contract Lab)	Sampler:	Lab PM: Kramer, Jessica	Carrier Tracking No(s):	COC No: 890-1323 1
Client Contact: Shipping/Receiving	Phone:	E-Mail: Jessica.Kramer@et.eurofinsus.com	State of Origin: New Mexico	Page: Page 1 of 1
Company: Eurofins Environment Testing South Centr		Accreditations Required (See note): NELAP - Texas		Job #: 890-4814-1
Address: 1211 W Florida Ave, ,	Due Date Requested: 6/16/2023			
City: Midland	TAT Requested (days):			
State, Zip: TX, 79701				
Phone: 432-704-5440(Tel)	PO #:			
Email:	WO #:			
Project Name: Corral Fly	Project #: 89000162			
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, Y Trizma, 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)	8015MOD_NM/8015NM_S_Prep (MOD) Full TPH	300_ORGFM_28D/DI_LEACH Chloride	8021B/5035FP_Calc BTEX - LL	Total_BTEX_GCV	8015MOD_Calc	Total Number of containers	Special Instructions/Note.
			Preservation Code:										
BH23-13 0' (890-4814-1)	6/12/23	10 00 Mountain		Solid			X	X	X	X	X	1	
BH23-13 2' (890-4814-2)	6/12/23	10 05 Mountain		Solid			X	X	X	X	X	1	
BH23-14 0' (890-4814-3)	6/12/23	10 10 Mountain		Solid			X	X	X	X	X	1	
BH23-14 2' (890-4814-4)	6/12/23	10 15 Mountain		Solid			X	X	X	X	X	1	

Note: Since laboratory accreditations are subject to change Eurofins Environment Testing South Central LLC places the ownership of method, analyte & accreditation compliance upon our 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 Environment Testing South Central LLC laboratory or other instructions will be provided Any changes to accreditation status should be brought to Eurofins Environment Testing South Central LLC attention immediately If all requested accreditations are current to date return the signed Chain of Custody attesting to said compliance to Eurofins Environment Testing South Central 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	Company	Received by	Date/Time	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

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6/19/2023
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Login Sample Receipt Checklist

Client: Vertex

Job Number: 890-4814-1
SDG Number: 23E-02502

Login Number: 4814
List Number: 1
Creator: Stutzman, Amanda

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: Vertex

Job Number: 890-4814-1
SDG Number: 23E-02502

Login Number: 4814
List Number: 2
Creator: Teel, Brianna

List Source: Eurofins Midland
List Creation: 06/14/23 11:22 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

PREPARED FOR

Attn: Chance Dixon
Vertex
3101 Boyd Dr
Carlsbad, New Mexico 88220

Generated 7/17/2023 1:46:58 PM Revision 1

JOB DESCRIPTION

Corral Fly SWD
SDG NUMBER 23E-02502

JOB NUMBER

890-4902-1

Eurofins Carlsbad
1089 N Canal St.
Carlsbad NM 88220

See page two for job notes and contact information.

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my EOL

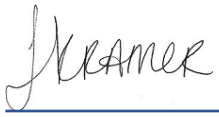
Eurofins Carlsbad

Job Notes

This report may not be reproduced except in full, and with written approval from the laboratory. The results relate only to the samples tested. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

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



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Revision 1

Authorized for release by
Jessica Kramer, Project Manager
Jessica.Kramer@et.eurofinsus.com
(432)704-5440

Client: Vertex
Project/Site: Corral Fly SWD

Laboratory Job ID: 890-4902-1
SDG: 23E-02502

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Definitions/Glossary

Client: Vertex
Project/Site: Corral Fly SWD

Job ID: 890-4902-1
SDG: 23E-02502

Qualifiers

GC VOA

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.

GC Semi VOA

Qualifier	Qualifier Description
*1	LCS/LCSD RPD exceeds control limits.
F1	MS and/or MSD recovery exceeds control limits.
F2	MS/MSD 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: Vertex
Project/Site: Corral Fly SWD

Job ID: 890-4902-1
SDG: 23E-02502

Job ID: 890-4902-1

Laboratory: Eurofins Carlsbad

Narrative

Job Narrative
890-4902-1

REVISION

The report being provided is a revision of the original report sent on 7/11/2023. The report (revision 1) is being revised due to Per client email, requesting TPH re run.

Receipt
The samples were received on 7/6/2023 9:23 AM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 1.0°C

GC VOA
Method 8021B: CCV was biased low for benzene. Another CCV was analyzed and acceptable within the 12 hour window; therefore the data was qualified and reported.(CCV 880-57167/20)

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 surrogate recovery for the blank associated with preparation batch 880-57168 and analytical batch 880-57224 was outside the upper control limits.

Method 8015MOD_NM: Surrogate recovery for the following sample was outside control limits: (890-4901-A-7-E MSD). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8015MOD_NM: Spike compounds were inadvertently omitted during the extraction process for the matrix spike (MS); therefore, matrix spike recoveries are unavailable for preparation batch 880-57168 and analytical batch 880-57224. The associated laboratory control sample (LCS) met acceptance criteria.

Method 8015MOD_NM: The RPD of the laboratory control sample (LCS) and laboratory control sample duplicate (LCSD) for preparation batch 880-57168 and analytical batch 880-57224 recovered outside control limits for the following analytes: Diesel Range Organics (Over C10-C28).

Method 8015MOD_NM: The surrogate recovery for the blank associated with preparation batch 880-57501 and analytical batch 880-57664 was outside the upper control limits.

Method 8015MOD_NM: Surrogate recovery for the following samples were outside control limits: (CCV 880-57664/20), (CCV 880-57664/31) and (CCV 880-57664/5). Evidence of matrix interferences is not obvious.

Method 8015MOD_NM: Surrogate recovery for the following samples were outside control limits: (890-4915-A-1-E) and (890-4915-A-1-F MS). 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.

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: Vertex
Project/Site: Corral Fly SWD

Job ID: 890-4902-1
SDG: 23E-02502

Client Sample ID: BH23-02 6"

Date Collected: 07/03/23 10:00
Date Received: 07/06/23 09:23
Sample Depth: 6

Lab Sample ID: 890-4902-1

Matrix: Solid

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		07/07/23 13:04	07/08/23 06:49	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		07/07/23 13:04	07/08/23 06:49	1
Toluene	<0.00200	U	0.00200		mg/Kg		07/07/23 13:04	07/08/23 06:49	1
Xylenes, Total	<0.00401	U	0.00401		mg/Kg		07/07/23 13:04	07/08/23 06:49	1
m-Xylene & p-Xylene	<0.00401	U	0.00401		mg/Kg		07/07/23 13:04	07/08/23 06:49	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		07/07/23 13:04	07/08/23 06:49	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*83*		*70 - 130*	*07/07/23 13:04*	*07/08/23 06:49*	*1*
1,4-Difluorobenzene (Surr)	*91*		*70 - 130*	*07/07/23 13:04*	*07/08/23 06:49*	*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			07/10/23 15:12	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			07/10/23 12:23	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		07/07/23 12:45	07/09/23 16:49	1
Diesel Range Organics (Over C10-C28)	<50.0	U *1	50.0		mg/Kg		07/07/23 12:45	07/09/23 16:49	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		07/07/23 12:45	07/09/23 16:49	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*129*		*70 - 130*	*07/07/23 12:45*	*07/09/23 16:49*	*1*
o-Terphenyl	*112*		*70 - 130*	*07/07/23 12:45*	*07/09/23 16:49*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**38.6**		4.98		mg/Kg			07/07/23 14:03	1

Client Sample ID: BH23-03 6'

Date Collected: 07/03/23 10:05
Date Received: 07/06/23 09:23
Sample Depth: 6

Lab Sample ID: 890-4902-2

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		07/07/23 13:04	07/08/23 07:09	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		07/07/23 13:04	07/08/23 07:09	1
Toluene	<0.00199	U	0.00199		mg/Kg		07/07/23 13:04	07/08/23 07:09	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		07/07/23 13:04	07/08/23 07:09	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		07/07/23 13:04	07/08/23 07:09	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		07/07/23 13:04	07/08/23 07:09	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*84*		*70 - 130*	*07/07/23 13:04*	*07/08/23 07:09*	*1*

Client Sample Results

Client: Vertex
Project/Site: Corral Fly SWD

Job ID: 890-4902-1
SDG: 23E-02502

Client Sample ID: BH23-03 6'

Date Collected: 07/03/23 10:05
Date Received: 07/06/23 09:23
Sample Depth: 6

Lab Sample ID: 890-4902-2

Matrix: Solid

Method: SW846 8021B - Volatile Organic Compounds (GC) (Continued)

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Difluorobenzene (Surr)	*87*		*70 - 130*	*07/07/23 13:04*	*07/08/23 07:09*	*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			07/10/23 15:12	1

Method: SW846 8015 NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.1	U	50.1		mg/Kg			07/10/23 12:23	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	<50.1	U	50.1		mg/Kg		07/12/23 12:11	07/14/23 16:57	1
Diesel Range Organics (Over C10-C28)	<50.1	U	50.1		mg/Kg		07/12/23 12:11	07/14/23 16:57	1
Oil Range Organics (Over C28-C36)	<50.1	U	50.1		mg/Kg		07/12/23 12:11	07/14/23 16:57	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*125*		*70 - 130*	*07/12/23 12:11*	*07/14/23 16:57*	*1*
o-Terphenyl	*106*		*70 - 130*	*07/12/23 12:11*	*07/14/23 16:57*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**43.7**		4.95		mg/Kg			07/07/23 14:18	1

Surrogate Summary

Client: Vertex
Project/Site: Corral Fly SWD

Job ID: 890-4902-1
SDG: 23E-02502

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)
880-30445-A-1-A MS	Matrix Spike	113	97
880-30445-A-1-B MSD	Matrix Spike Duplicate	114	96
890-4902-1	BH23-02 6"	83	91
890-4902-2	BH23-03 6'	84	87
LCS 880-57170/1-A	Lab Control Sample	104	94
LCSD 880-57170/2-A	Lab Control Sample Dup	118	99
MB 880-57164/5-A	Method Blank	70	88
MB 880-57170/5-A	Method Blank	82	76

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)
890-4901-A-7-D MS	Matrix Spike	107	93
890-4901-A-7-E MSD	Matrix Spike Duplicate	136 S1+	109
890-4902-1	BH23-02 6"	129	112
890-4902-2	BH23-03 6'	125	106
890-4915-A-1-F MS	Matrix Spike	140 S1+	103
890-4915-A-1-G MSD	Matrix Spike Duplicate	124	89
LCS 880-57168/2-A	Lab Control Sample	87	80
LCS 880-57501/2-A	Lab Control Sample	106	92
LCSD 880-57168/3-A	Lab Control Sample Dup	108	98
LCSD 880-57501/3-A	Lab Control Sample Dup	103	91
MB 880-57168/1-A	Method Blank	151 S1+	131 S1+
MB 880-57501/1-A	Method Blank	146 S1+	122

Surrogate Legend

1CO = 1-Chlorooctane
OTPH = o-Terphenyl

QC Sample Results

Client: Vertex
Project/Site: Corral Fly SWD

Job ID: 890-4902-1
SDG: 23E-02502

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-57164/5-A
Matrix: Solid
Analysis Batch: 57167

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 57164

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		07/07/23 12:29	07/07/23 18:09	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		07/07/23 12:29	07/07/23 18:09	1
Toluene	<0.00200	U	0.00200		mg/Kg		07/07/23 12:29	07/07/23 18:09	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		07/07/23 12:29	07/07/23 18:09	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		07/07/23 12:29	07/07/23 18:09	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		07/07/23 12:29	07/07/23 18:09	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*70*		*70 - 130*	*07/07/23 12:29*	*07/07/23 18:09*	*1*
1,4-Difluorobenzene (Surr)	*88*		*70 - 130*	*07/07/23 12:29*	*07/07/23 18:09*	*1*

Lab Sample ID: MB 880-57170/5-A
Matrix: Solid
Analysis Batch: 57167

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 57170

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		07/07/23 13:04	07/08/23 04:45	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		07/07/23 13:04	07/08/23 04:45	1
Toluene	<0.00200	U	0.00200		mg/Kg		07/07/23 13:04	07/08/23 04:45	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		07/07/23 13:04	07/08/23 04:45	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		07/07/23 13:04	07/08/23 04:45	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		07/07/23 13:04	07/08/23 04:45	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*82*		*70 - 130*	*07/07/23 13:04*	*07/08/23 04:45*	*1*
1,4-Difluorobenzene (Surr)	*76*		*70 - 130*	*07/07/23 13:04*	*07/08/23 04:45*	*1*

Lab Sample ID: LCS 880-57170/1-A
Matrix: Solid
Analysis Batch: 57167

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 57170

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	0.100	0.1009		mg/Kg		101	70 - 130
Ethylbenzene	0.100	0.1173		mg/Kg		117	70 - 130
Toluene	0.100	0.1211		mg/Kg		121	70 - 130
m-Xylene & p-Xylene	0.200	0.2350		mg/Kg		118	70 - 130
o-Xylene	0.100	0.1184		mg/Kg		118	70 - 130

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*104*		*70 - 130*
1,4-Difluorobenzene (Surr)	*94*		*70 - 130*

Lab Sample ID: LCSD 880-57170/2-A
Matrix: Solid
Analysis Batch: 57167

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 57170

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	0.100	0.08804		mg/Kg		88	70 - 130	14	35

QC Sample Results

Client: Vertex
Project/Site: Corral Fly SWD

Job ID: 890-4902-1
SDG: 23E-02502

Method: 8021B - Volatile Organic Compounds (GC) (Continued)

Lab Sample ID: LCSD 880-57170/2-A
Matrix: Solid
Analysis Batch: 57167

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 57170

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Ethylbenzene			0.100	0.1004		mg/Kg		100	70 - 130	16	35
Toluene			0.100	0.1024		mg/Kg		102	70 - 130	17	35
m-Xylene & p-Xylene			0.200	0.2044		mg/Kg		102	70 - 130	14	35
o-Xylene			0.100	0.1060		mg/Kg		106	70 - 130	11	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*118*		*70 - 130*
1,4-Difluorobenzene (Surr)	*99*		*70 - 130*

Lab Sample ID: 880-30445-A-1-A MS
Matrix: Solid
Analysis Batch: 57167

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 57170

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene	<0.00202	U	0.0996	0.08366		mg/Kg		83	70 - 130		
Ethylbenzene	<0.00202	U	0.0996	0.08941		mg/Kg		90	70 - 130		
Toluene	<0.00202	U	0.0996	0.09259		mg/Kg		93	70 - 130		
m-Xylene & p-Xylene	<0.00403	U	0.199	0.1768		mg/Kg		89	70 - 130		
o-Xylene	<0.00202	U	0.0996	0.08843		mg/Kg		89	70 - 130		

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*113*		*70 - 130*
1,4-Difluorobenzene (Surr)	*97*		*70 - 130*

Lab Sample ID: 880-30445-A-1-B MSD
Matrix: Solid
Analysis Batch: 57167

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 57170

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	0.07753		mg/Kg		77	70 - 130	8	35
Ethylbenzene	<0.00202	U	0.0990	0.08307		mg/Kg		84	70 - 130	7	35
Toluene	<0.00202	U	0.0990	0.08626		mg/Kg		87	70 - 130	7	35
m-Xylene & p-Xylene	<0.00403	U	0.198	0.1594		mg/Kg		81	70 - 130	10	35
o-Xylene	<0.00202	U	0.0990	0.07964		mg/Kg		80	70 - 130	10	35

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*114*		*70 - 130*
1,4-Difluorobenzene (Surr)	*96*		*70 - 130*

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

Lab Sample ID: MB 880-57168/1-A
Matrix: Solid
Analysis Batch: 57224

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 57168

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		07/07/23 12:45	07/09/23 08:19	1

QC Sample Results

Client: Vertex
Project/Site: Corral Fly SWD

Job ID: 890-4902-1
SDG: 23E-02502

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

Lab Sample ID: MB 880-57168/1-A
Matrix: Solid
Analysis Batch: 57224

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 57168

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		07/07/23 12:45	07/09/23 08:19	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		07/07/23 12:45	07/09/23 08:19	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*151*	*S1+*	*70 - 130*	*07/07/23 12:45*	*07/09/23 08:19*	*1*
o-Terphenyl	*131*	*S1+*	*70 - 130*	*07/07/23 12:45*	*07/09/23 08:19*	*1*

Lab Sample ID: LCS 880-57168/2-A
Matrix: Solid
Analysis Batch: 57224

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 57168

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics (GRO)-C6-C10	1000	881.5		mg/Kg		88	70 - 130
Diesel Range Organics (Over C10-C28)	1000	697.0		mg/Kg		70	70 - 130

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1-Chlorooctane	*87*		*70 - 130*
o-Terphenyl	*80*		*70 - 130*

Lab Sample ID: LCSD 880-57168/3-A
Matrix: Solid
Analysis Batch: 57224

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 57168

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	1000	988.4		mg/Kg		99	70 - 130	11	20
Diesel Range Organics (Over C10-C28)	1000	893.1	*1	mg/Kg		89	70 - 130	25	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1-Chlorooctane	*108*		*70 - 130*
o-Terphenyl	*98*		*70 - 130*

Lab Sample ID: 890-4901-A-7-D MS
Matrix: Solid
Analysis Batch: 57224

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 57168

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics (GRO)-C6-C10	<50.1	U F1 F2	999	<50.0	U F1	mg/Kg		-2	70 - 130
Diesel Range Organics (Over C10-C28)	239	*1 F1 F2	999	235.9	F1	mg/Kg		-0.3	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
1-Chlorooctane	*107*		*70 - 130*
o-Terphenyl	*93*		*70 - 130*

QC Sample Results

Client: Vertex
Project/Site: Corral Fly SWD

Job ID: 890-4902-1
SDG: 23E-02502

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

Lab Sample ID: 890-4901-A-7-E MSD
Matrix: Solid
Analysis Batch: 57224

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 57168

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	<50.1	U F1 F2	1000	1166	F2	mg/Kg		112	70 - 130	192	20
Diesel Range Organics (Over C10-C28)	239	*1 F1 F2	1000	1539	F2	mg/Kg		130	70 - 130	147	20

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
1-Chlorooctane	*136*	*S1+*	*70 - 130*
o-Terphenyl	*109*		*70 - 130*

Lab Sample ID: MB 880-57501/1-A
Matrix: Solid
Analysis Batch: 57664

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 57501

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		07/12/23 12:11	07/14/23 07:48	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		07/12/23 12:11	07/14/23 07:48	1
Oll Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		07/12/23 12:11	07/14/23 07:48	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*146*	*S1+*	*70 - 130*	*07/12/23 12:11*	*07/14/23 07:48*	*1*
o-Terphenyl	*122*		*70 - 130*	*07/12/23 12:11*	*07/14/23 07:48*	*1*

Lab Sample ID: LCS 880-57501/2-A
Matrix: Solid
Analysis Batch: 57664

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 57501

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics (GRO)-C6-C10	1000	1156		mg/Kg		116	70 - 130
Diesel Range Organics (Over C10-C28)	1000	990.1		mg/Kg		99	70 - 130

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1-Chlorooctane	*106*		*70 - 130*
o-Terphenyl	*92*		*70 - 130*

Lab Sample ID: LCSD 880-57501/3-A
Matrix: Solid
Analysis Batch: 57664

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 57501

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	1000	1034		mg/Kg		103	70 - 130	11	20
Diesel Range Organics (Over C10-C28)	1000	873.4		mg/Kg		87	70 - 130	13	20

QC Sample Results

Client: Vertex
Project/Site: Corral Fly SWD

Job ID: 890-4902-1
SDG: 23E-02502

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

Lab Sample ID: LCSD 880-57501/3-A
Matrix: Solid
Analysis Batch: 57664

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 57501

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
1-Chlorooctane	103		70 - 130
o-Terphenyl	91		70 - 130

Lab Sample ID: 890-4915-A-1-F MS
Matrix: Solid
Analysis Batch: 57664

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 57501

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics (GRO)-C6-C10	<50.1	U	1000	1142		mg/Kg		110	70 - 130
Diesel Range Organics (Over C10-C28)	164		1000	1252		mg/Kg		108	70 - 130

Surrogate	MS %Recovery	MS Qualifier	Limits
1-Chlorooctane	140	S1+	70 - 130
o-Terphenyl	103		70 - 130

Lab Sample ID: 890-4915-A-1-G MSD
Matrix: Solid
Analysis Batch: 57664

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 57501

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	<50.1	U	999	1002		mg/Kg		97	70 - 130	13	20
Diesel Range Organics (Over C10-C28)	164		999	1081		mg/Kg		92	70 - 130	15	20

Surrogate	MSD %Recovery	MSD Qualifier	Limits
1-Chlorooctane	124		70 - 130
o-Terphenyl	89		70 - 130

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-57126/1-A
Matrix: Solid
Analysis Batch: 57174

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			07/07/23 12:35	1

Lab Sample ID: LCS 880-57126/2-A
Matrix: Solid
Analysis Batch: 57174

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	250	252.0		mg/Kg		101	90 - 110

QC Sample Results

Client: Vertex
Project/Site: Corral Fly SWD

Job ID: 890-4902-1
SDG: 23E-02502

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: LCSD 880-57126/3-A
Matrix: Solid
Analysis Batch: 57174

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	252.5		mg/Kg		101	90 - 110	0	20

Lab Sample ID: 890-4902-1 MS
Matrix: Solid
Analysis Batch: 57174

Client Sample ID: BH23-02 6"
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	38.6		249	290.7		mg/Kg		101	90 - 110

Lab Sample ID: 890-4902-1 MSD
Matrix: Solid
Analysis Batch: 57174

Client Sample ID: BH23-02 6"
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	38.6		249	289.9		mg/Kg		101	90 - 110	0	20

QC Association Summary

Client: Vertex
Project/Site: Corral Fly SWD

Job ID: 890-4902-1
SDG: 23E-02502

GC VOA

Prep Batch: 57164

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-57164/5-A	Method Blank	Total/NA	Solid	5035	

Analysis Batch: 57167

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4902-1	BH23-02 6"	Total/NA	Solid	8021B	57170
890-4902-2	BH23-03 6'	Total/NA	Solid	8021B	57170
MB 880-57164/5-A	Method Blank	Total/NA	Solid	8021B	57164
MB 880-57170/5-A	Method Blank	Total/NA	Solid	8021B	57170
LCS 880-57170/1-A	Lab Control Sample	Total/NA	Solid	8021B	57170
LCSD 880-57170/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	57170
880-30445-A-1-A MS	Matrix Spike	Total/NA	Solid	8021B	57170
880-30445-A-1-B MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	57170

Prep Batch: 57170

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4902-1	BH23-02 6"	Total/NA	Solid	5035	
890-4902-2	BH23-03 6'	Total/NA	Solid	5035	
MB 880-57170/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-57170/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-57170/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
880-30445-A-1-A MS	Matrix Spike	Total/NA	Solid	5035	
880-30445-A-1-B MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Analysis Batch: 57351

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4902-1	BH23-02 6"	Total/NA	Solid	Total BTEX	
890-4902-2	BH23-03 6'	Total/NA	Solid	Total BTEX	

GC Semi VOA

Prep Batch: 57168

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4902-1	BH23-02 6"	Total/NA	Solid	8015NM Prep	
MB 880-57168/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-57168/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-57168/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-4901-A-7-D MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
890-4901-A-7-E MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

Analysis Batch: 57224

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4902-1	BH23-02 6"	Total/NA	Solid	8015B NM	57168
MB 880-57168/1-A	Method Blank	Total/NA	Solid	8015B NM	57168
LCS 880-57168/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	57168
LCSD 880-57168/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	57168
890-4901-A-7-D MS	Matrix Spike	Total/NA	Solid	8015B NM	57168
890-4901-A-7-E MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	57168

Analysis Batch: 57304

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4902-1	BH23-02 6"	Total/NA	Solid	8015 NM	

QC Association Summary

Client: Vertex
Project/Site: Corral Fly SWD

Job ID: 890-4902-1
SDG: 23E-02502

GC Semi VOA (Continued)

Analysis Batch: 57304 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4902-2	BH23-03 6'	Total/NA	Solid	8015 NM	

Prep Batch: 57501

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4902-2	BH23-03 6'	Total/NA	Solid	8015NM Prep	
MB 880-57501/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-57501/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-57501/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-4915-A-1-F MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
890-4915-A-1-G MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

Analysis Batch: 57664

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4902-2	BH23-03 6'	Total/NA	Solid	8015B NM	57501
MB 880-57501/1-A	Method Blank	Total/NA	Solid	8015B NM	57501
LCS 880-57501/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	57501
LCSD 880-57501/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	57501
890-4915-A-1-F MS	Matrix Spike	Total/NA	Solid	8015B NM	57501
890-4915-A-1-G MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	57501

HPLC/IC

Leach Batch: 57126

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4902-1	BH23-02 6"	Soluble	Solid	DI Leach	
890-4902-2	BH23-03 6'	Soluble	Solid	DI Leach	
MB 880-57126/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-57126/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-57126/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-4902-1 MS	BH23-02 6"	Soluble	Solid	DI Leach	
890-4902-1 MSD	BH23-02 6"	Soluble	Solid	DI Leach	

Analysis Batch: 57174

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4902-1	BH23-02 6"	Soluble	Solid	300.0	57126
890-4902-2	BH23-03 6'	Soluble	Solid	300.0	57126
MB 880-57126/1-A	Method Blank	Soluble	Solid	300.0	57126
LCS 880-57126/2-A	Lab Control Sample	Soluble	Solid	300.0	57126
LCSD 880-57126/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	57126
890-4902-1 MS	BH23-02 6"	Soluble	Solid	300.0	57126
890-4902-1 MSD	BH23-02 6"	Soluble	Solid	300.0	57126

Lab Chronicle

Client: Vertex
Project/Site: Corral Fly SWD

Job ID: 890-4902-1
SDG: 23E-02502

Client Sample ID: BH23-02 6"
Date Collected: 07/03/23 10:00
Date Received: 07/06/23 09:23

Lab Sample ID: 890-4902-1
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			4.99 g	5 mL	57170	07/07/23 13:04	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	57167	07/08/23 06:49	AJ	EET MID
Total/NA	Analysis	Total BTEX		1			57351	07/10/23 15:12	AJ	EET MID
Total/NA	Analysis	8015 NM		1			57304	07/10/23 12:23	SM	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	57168	07/07/23 12:45	SM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	57224	07/09/23 16:49	SM	EET MID
Soluble	Leach	DI Leach			5.02 g	50 mL	57126	07/07/23 09:34	KS	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	57174	07/07/23 14:03	CH	EET MID

Client Sample ID: BH23-03 6'
Date Collected: 07/03/23 10:05
Date Received: 07/06/23 09:23

Lab Sample ID: 890-4902-2
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			5.03 g	5 mL	57170	07/07/23 13:04	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	57167	07/08/23 07:09	AJ	EET MID
Total/NA	Analysis	Total BTEX		1			57351	07/10/23 15:12	AJ	EET MID
Total/NA	Analysis	8015 NM		1			57304	07/10/23 12:23	SM	EET MID
Total/NA	Prep	8015NM Prep			9.99 g	10 mL	57501	07/12/23 12:11	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	57664	07/14/23 16:57	SM	EET MID
Soluble	Leach	DI Leach			5.05 g	50 mL	57126	07/07/23 09:34	KS	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	57174	07/07/23 14:18	CH	EET MID

Laboratory References:
EET MID = Eurofins Midland, 1211 W. Florida Ave, Midland, TX 79701, TEL (432)704-5440

Accreditation/Certification Summary

Client: Vertex
Project/Site: Corral Fly SWD

Job ID: 890-4902-1
SDG: 23E-02502

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	T104704400-23-26	06-30-24

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: Vertex
Project/Site: Corral Fly SWD

Job ID: 890-4902-1
SDG: 23E-02502

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	EPA	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
EPA = US Environmental Protection Agency
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: Vertex
Project/Site: Corral Fly SWD

Job ID: 890-4902-1
SDG: 23E-02502

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-4902-1	BH23-02 6"	Solid	07/03/23 10:00	07/06/23 09:23	6
890-4902-2	BH23-03 6'	Solid	07/03/23 10:05	07/06/23 09:23	6

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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: _____

www.xenco.com Page 1 of 1

Project Manager:	Chance Dixon	Bill to: (if different)	Rob Kirk
Company Name:	Vertex	Company Name:	Solaris
Address:	On File	Address:	
City, State ZIP:		City, State ZIP:	
Phone:		Email:	cdixon@vertex.ca analytical@vertex.ca

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:	Corral Fly SWD	Turn Around	☒ Routine ☐ Rush
Project Number:	23E-02502	Due Date:	
Project Location:		TAT starts the day received by the lab, if received by 4:30pm	
Sampler's Name:	Chance Dixon		
PO #:			

SAMPLE RECEIPT			
Temp Blank:	Yes (No)	Wet Ice:	(Yes) No
Samples Received Intact:	(Yes) No	Thermometer ID:	TM003-T
Cooler Custody Seals:	Yes No (N/A)	Correction Factor:	-0.2
Sample Custody Seals:	Yes No (N/A)	Temperature Reading:	1.2
Total Containers:		Corrected Temperature:	1.0

ANALYSIS REQUEST

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Grab/Comp	# of Cont	Pres. Code	Parameters: TPH 8015D	BTEX 8021	Cl
BH23-02 6'	Soil	7/3/23	10:00	6		1		1	1	1
BH23-03 6'			10:05	6						

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

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	Ace Af	7-6-23923	2		
3			4		
5			6		

Revised Date: 08/25/2020 Rev. 2020.2

Received by OCD: 7/24/2024 3:24:20 PM
Released to Imaging: 7/26/2024 3:59:45 PM
7/17/2023 (Rev. 1)

Login Sample Receipt Checklist

Client: Vertex

Job Number: 890-4902-1
SDG Number: 23E-02502

Login Number: 4902
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: Vertex

Job Number: 890-4902-1
SDG Number: 23E-02502

Login Number: 4902
List Number: 2
Creator: Rodriguez, Leticia

List Source: Eurofins Midland
List Creation: 07/07/23 10:52 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	

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ANALYTICAL REPORT

PREPARED FOR

Attn: Chance Dixon
Vertex
3101 Boyd Dr
Carlsbad, New Mexico 88220

Generated 7/17/2023 10:23:59 AM

JOB DESCRIPTION

Corral Fly
SDG NUMBER 23E-02502

JOB NUMBER

890-4917-1

Eurofins Carlsbad
1089 N Canal St.
Carlsbad NM 88220

See page two for job notes and contact information.

Released to Imaging: 7/26/2024 3:39:45 PM

my EOL

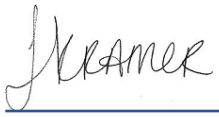
Eurofins Carlsbad

Job Notes

This report may not be reproduced except in full, and with written approval from the laboratory. The results relate only to the samples tested. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

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



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Authorized for release by
Jessica Kramer, Project Manager
Jessica.Kramer@et.eurofinsus.com
(432)704-5440

Client: Vertex
Project/Site: Corral Fly

Laboratory Job ID: 890-4917-1
SDG: 23E-02502

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Eurofins Carlsbad
7/17/2023

Definitions/Glossary

Client: Vertex
Project/Site: Corral Fly

Job ID: 890-4917-1
SDG: 23E-02502

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.
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: Vertex
Project/Site: Corral Fly

Job ID: 890-4917-1
SDG: 23E-02502

Job ID: 890-4917-1

Laboratory: Eurofins Carlsbad

Narrative

Job Narrative
890-4917-1

Receipt
The samples were received on 7/7/2023 4:20 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 23.6°C

Receipt Exceptions
The following samples were received and analyzed from an unpreserved bulk soil jar: BES23-01 0.5' (890-4917-1), BES23-02 0.5' (890-4917-2), BES23-03 0.5' (890-4917-3), BES23-04 0.5' (890-4917-4), BES23-05 0.5' (890-4917-5), BES23-06 0.5' (890-4917-6), BES23-07 0.5' (890-4917-7), BES23-08 0.5' (890-4917-8), BES23-09 0.5' (890-4917-9), BES23-10 0.5' (890-4917-10), BES23-11 0.5' (890-4917-11), BES23-12 0.5' (890-4917-12), BES23-13 0.5' (890-4917-13), BES23-14 0.5' (890-4917-14), BES23-15 0.5' (890-4917-15), BES23-16 0.5' (890-4917-16), BES23-17 0.5' (890-4917-17), BES23-18 0.5' (890-4917-18), BES23-19 0.5' (890-4917-19) and BES23-20 0.5' (890-4917-20).

GC VOA
Method 8021B: The surrogate recovery for the blank associated with preparation batch 880-57409 and analytical batch 880-57424 was outside the upper control limits.

Method 8021B: Surrogate recovery for the following samples were outside control limits: BES23-09 0.5' (890-4917-9) and BES23-16 0.5' (890-4917-16). 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 samples were outside control limits: (CCV 880-57755/31), (CCV 880-57755/47) and (CCV 880-57755/58). Evidence of matrix interferences is not obvious.

Method 8015MOD_NM: The matrix spike (MS) recoveries for preparation batch 880-57500 and analytical batch 880-57755 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.

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: Vertex
Project/Site: Corral Fly

Job ID: 890-4917-1
SDG: 23E-02502

Client Sample ID: BES23-01 0.5'

Lab Sample ID: 890-4917-1
Matrix: Solid
Date Collected: 07/07/23 09:00
Date Received: 07/07/23 16:20
Sample Depth: 0.5

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		07/11/23 12:27	07/12/23 00:00	1
Ethylbenzene	<0.00202	U	0.00202		mg/Kg		07/11/23 12:27	07/12/23 00:00	1
Toluene	<0.00202	U	0.00202		mg/Kg		07/11/23 12:27	07/12/23 00:00	1
Xylenes, Total	<0.00404	U	0.00404		mg/Kg		07/11/23 12:27	07/12/23 00:00	1
m-Xylene & p-Xylene	<0.00404	U	0.00404		mg/Kg		07/11/23 12:27	07/12/23 00:00	1
o-Xylene	<0.00202	U	0.00202		mg/Kg		07/11/23 12:27	07/12/23 00:00	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*100*		*70 - 130*	*07/11/23 12:27*	*07/12/23 00:00*	*1*
1,4-Difluorobenzene (Surr)	*80*		*70 - 130*	*07/11/23 12:27*	*07/12/23 00:00*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00404	U	0.00404		mg/Kg			07/12/23 14:53	1

Method: SW846 8015 NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**145**		49.7		mg/Kg			07/17/23 10:54	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	<49.7	U	49.7		mg/Kg		07/12/23 11:56	07/16/23 21:47	1
Diesel Range Organics (Over C10-C28)	**145**	**F1**	49.7		mg/Kg		07/12/23 11:56	07/16/23 21:47	1
OII Range Organics (Over C28-C36)	<49.7	U	49.7		mg/Kg		07/12/23 11:56	07/16/23 21:47	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*92*		*70 - 130*	*07/12/23 11:56*	*07/16/23 21:47*	*1*
o-Terphenyl	*99*		*70 - 130*	*07/12/23 11:56*	*07/16/23 21:47*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**7870**		50.1		mg/Kg			07/11/23 20:38	10

Client Sample ID: BES23-02 0.5'

Lab Sample ID: 890-4917-2
Matrix: Solid
Date Collected: 07/07/23 09:05
Date Received: 07/07/23 16:20
Sample Depth: 0.5

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		07/11/23 12:27	07/12/23 00:25	1
Ethylbenzene	<0.00202	U	0.00202		mg/Kg		07/11/23 12:27	07/12/23 00:25	1
Toluene	<0.00202	U	0.00202		mg/Kg		07/11/23 12:27	07/12/23 00:25	1
Xylenes, Total	<0.00403	U	0.00403		mg/Kg		07/11/23 12:27	07/12/23 00:25	1
m-Xylene & p-Xylene	<0.00403	U	0.00403		mg/Kg		07/11/23 12:27	07/12/23 00:25	1
o-Xylene	<0.00202	U	0.00202		mg/Kg		07/11/23 12:27	07/12/23 00:25	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*107*		*70 - 130*	*07/11/23 12:27*	*07/12/23 00:25*	*1*

Client Sample Results

Client: Vertex
Project/Site: Corral Fly

Job ID: 890-4917-1
SDG: 23E-02502

Client Sample ID: BES23-02 0.5'

Lab Sample ID: 890-4917-2
Matrix: Solid
Date Collected: 07/07/23 09:05
Date Received: 07/07/23 16:20
Sample Depth: 0.5

Method: SW846 8021B - Volatile Organic Compounds (GC) (Continued)

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Difluorobenzene (Surr)	*79*		*70 - 130*	*07/11/23 12:27*	*07/12/23 00:25*	*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			07/12/23 14:53	1

Method: SW846 8015 NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**70.6**		50.5		mg/Kg			07/17/23 10:54	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	<50.5	U	50.5		mg/Kg		07/12/23 11:56	07/16/23 22:47	1
Diesel Range Organics (Over C10-C28)	**70.6**		50.5		mg/Kg		07/12/23 11:56	07/16/23 22:47	1
OII Range Organics (Over C28-C36)	<50.5	U	50.5		mg/Kg		07/12/23 11:56	07/16/23 22:47	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*108*		*70 - 130*	*07/12/23 11:56*	*07/16/23 22:47*	*1*
o-Terphenyl	*116*		*70 - 130*	*07/12/23 11:56*	*07/16/23 22:47*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**1450**		24.9		mg/Kg			07/11/23 20:53	5

Client Sample ID: BES23-03 0.5'

Lab Sample ID: 890-4917-3
Matrix: Solid
Date Collected: 07/07/23 09:10
Date Received: 07/07/23 16:20
Sample Depth: 0.5

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		07/11/23 12:27	07/12/23 00:50	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		07/11/23 12:27	07/12/23 00:50	1
Toluene	<0.00200	U	0.00200		mg/Kg		07/11/23 12:27	07/12/23 00:50	1
Xylenes, Total	<0.00401	U	0.00401		mg/Kg		07/11/23 12:27	07/12/23 00:50	1
m-Xylene & p-Xylene	<0.00401	U	0.00401		mg/Kg		07/11/23 12:27	07/12/23 00:50	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		07/11/23 12:27	07/12/23 00:50	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*121*		*70 - 130*	*07/11/23 12:27*	*07/12/23 00:50*	*1*
1,4-Difluorobenzene (Surr)	*85*		*70 - 130*	*07/11/23 12:27*	*07/12/23 00:50*	*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			07/12/23 14:53	1

Method: SW846 8015 NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**120**		49.7		mg/Kg			07/17/23 10:54	1

Client Sample Results

Client: Vertex
Project/Site: Corral Fly

Job ID: 890-4917-1
SDG: 23E-02502

Client Sample ID: BES23-03 0.5'

Lab Sample ID: 890-4917-3
Matrix: Solid
Date Collected: 07/07/23 09:10
Date Received: 07/07/23 16:20
Sample Depth: 0.5

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	<49.7	U	49.7		mg/Kg		07/12/23 11:56	07/16/23 23:08	1
Diesel Range Organics (Over C10-C28)	**120**		49.7		mg/Kg		07/12/23 11:56	07/16/23 23:08	1
OII Range Organics (Over C28-C36)	<49.7	U	49.7		mg/Kg		07/12/23 11:56	07/16/23 23:08	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*105*		*70 - 130*	*07/12/23 11:56*	*07/16/23 23:08*	*1*
o-Terphenyl	*112*		*70 - 130*	*07/12/23 11:56*	*07/16/23 23:08*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**2180**		24.9		mg/Kg			07/11/23 20:58	5

Client Sample ID: BES23-04 0.5'

Lab Sample ID: 890-4917-4
Matrix: Solid
Date Collected: 07/07/23 09:15
Date Received: 07/07/23 16:20
Sample Depth: 0.5

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00198	U	0.00198		mg/Kg		07/11/23 12:27	07/12/23 01:15	1
Ethylbenzene	<0.00198	U	0.00198		mg/Kg		07/11/23 12:27	07/12/23 01:15	1
Toluene	<0.00198	U	0.00198		mg/Kg		07/11/23 12:27	07/12/23 01:15	1
Xylenes, Total	<0.00396	U	0.00396		mg/Kg		07/11/23 12:27	07/12/23 01:15	1
m-Xylene & p-Xylene	<0.00396	U	0.00396		mg/Kg		07/11/23 12:27	07/12/23 01:15	1
o-Xylene	<0.00198	U	0.00198		mg/Kg		07/11/23 12:27	07/12/23 01:15	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*128*		*70 - 130*	*07/11/23 12:27*	*07/12/23 01:15*	*1*
1,4-Difluorobenzene (Surr)	*87*		*70 - 130*	*07/11/23 12:27*	*07/12/23 01:15*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00396	U	0.00396		mg/Kg			07/12/23 14:53	1

Method: SW846 8015 NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**87.0**		49.8		mg/Kg			07/17/23 10:54	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		07/12/23 11:56	07/16/23 23:28	1
Diesel Range Organics (Over C10-C28)	**87.0**		49.8		mg/Kg		07/12/23 11:56	07/16/23 23:28	1
OII Range Organics (Over C28-C36)	<49.8	U	49.8		mg/Kg		07/12/23 11:56	07/16/23 23:28	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*89*		*70 - 130*	*07/12/23 11:56*	*07/16/23 23:28*	*1*
o-Terphenyl	*94*		*70 - 130*	*07/12/23 11:56*	*07/16/23 23:28*	*1*

Client Sample Results

Client: Vertex
Project/Site: Corral Fly

Job ID: 890-4917-1
SDG: 23E-02502

Client Sample ID: BES23-04 0.5'

Lab Sample ID: 890-4917-4
Matrix: Solid
Date Collected: 07/07/23 09:15
Date Received: 07/07/23 16:20
Sample Depth: 0.5

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**8020**		50.2		mg/Kg			07/11/23 21:04	10

Client Sample ID: BES23-05 0.5'

Lab Sample ID: 890-4917-5
Matrix: Solid
Date Collected: 07/07/23 09:20
Date Received: 07/07/23 16:20
Sample Depth: 0.5

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		07/11/23 12:27	07/12/23 01:40	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		07/11/23 12:27	07/12/23 01:40	1
Toluene	<0.00200	U	0.00200		mg/Kg		07/11/23 12:27	07/12/23 01:40	1
Xylenes, Total	<0.00399	U	0.00399		mg/Kg		07/11/23 12:27	07/12/23 01:40	1
m-Xylene & p-Xylene	<0.00399	U	0.00399		mg/Kg		07/11/23 12:27	07/12/23 01:40	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		07/11/23 12:27	07/12/23 01:40	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*105*		*70 - 130*	*07/11/23 12:27*	*07/12/23 01:40*	*1*
1,4-Difluorobenzene (Surr)	*85*		*70 - 130*	*07/11/23 12:27*	*07/12/23 01:40*	*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			07/12/23 14:53	1

Method: SW846 8015 NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**66.1**		50.0		mg/Kg			07/17/23 10:54	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		07/12/23 11:56	07/16/23 23:48	1
Diesel Range Organics (Over C10-C28)	**66.1**		50.0		mg/Kg		07/12/23 11:56	07/16/23 23:48	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		07/12/23 11:56	07/16/23 23:48	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*103*		*70 - 130*	*07/12/23 11:56*	*07/16/23 23:48*	*1*
o-Terphenyl	*113*		*70 - 130*	*07/12/23 11:56*	*07/16/23 23:48*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**2210**		24.8		mg/Kg			07/11/23 21:09	5

Client Sample Results

Client: Vertex
Project/Site: Corral Fly

Job ID: 890-4917-1
SDG: 23E-02502

Client Sample ID: BES23-06 0.5'

Lab Sample ID: 890-4917-6
Matrix: Solid
Date Collected: 07/07/23 09:25
Date Received: 07/07/23 16:20
Sample Depth: 0.5

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		07/11/23 12:27	07/12/23 02:05	1
Ethylbenzene	<0.00201	U	0.00201		mg/Kg		07/11/23 12:27	07/12/23 02:05	1
Toluene	<0.00201	U	0.00201		mg/Kg		07/11/23 12:27	07/12/23 02:05	1
Xylenes, Total	<0.00402	U	0.00402		mg/Kg		07/11/23 12:27	07/12/23 02:05	1
m-Xylene & p-Xylene	<0.00402	U	0.00402		mg/Kg		07/11/23 12:27	07/12/23 02:05	1
o-Xylene	<0.00201	U	0.00201		mg/Kg		07/11/23 12:27	07/12/23 02:05	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*113*		*70 - 130*	*07/11/23 12:27*	*07/12/23 02:05*	*1*
1,4-Difluorobenzene (Surr)	*86*		*70 - 130*	*07/11/23 12:27*	*07/12/23 02:05*	*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			07/12/23 14:53	1

Method: SW846 8015 NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**170**		50.3		mg/Kg			07/17/23 10:54	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	<50.3	U	50.3		mg/Kg		07/12/23 11:56	07/17/23 00:08	1
Diesel Range Organics (Over C10-C28)	**170**		50.3		mg/Kg		07/12/23 11:56	07/17/23 00:08	1
OII Range Organics (Over C28-C36)	<50.3	U	50.3		mg/Kg		07/12/23 11:56	07/17/23 00:08	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*93*		*70 - 130*	*07/12/23 11:56*	*07/17/23 00:08*	*1*
o-Terphenyl	*100*		*70 - 130*	*07/12/23 11:56*	*07/17/23 00:08*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**8940**		50.4		mg/Kg			07/11/23 21:24	10

Client Sample ID: BES23-07 0.5'

Lab Sample ID: 890-4917-7
Matrix: Solid
Date Collected: 07/07/23 09:30
Date Received: 07/07/23 16:20
Sample Depth: 0.5

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		07/11/23 12:27	07/12/23 02:30	1
Ethylbenzene	<0.00202	U	0.00202		mg/Kg		07/11/23 12:27	07/12/23 02:30	1
Toluene	<0.00202	U	0.00202		mg/Kg		07/11/23 12:27	07/12/23 02:30	1
Xylenes, Total	<0.00403	U	0.00403		mg/Kg		07/11/23 12:27	07/12/23 02:30	1
m-Xylene & p-Xylene	<0.00403	U	0.00403		mg/Kg		07/11/23 12:27	07/12/23 02:30	1
o-Xylene	<0.00202	U	0.00202		mg/Kg		07/11/23 12:27	07/12/23 02:30	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*127*		*70 - 130*	*07/11/23 12:27*	*07/12/23 02:30*	*1*

Eurofins Carlsbad

Client Sample Results

Client: Vertex
Project/Site: Corral Fly

Job ID: 890-4917-1
SDG: 23E-02502

Client Sample ID: BES23-07 0.5'

Lab Sample ID: 890-4917-7
Matrix: Solid
Date Collected: 07/07/23 09:30
Date Received: 07/07/23 16:20
Sample Depth: 0.5

Method: SW846 8021B - Volatile Organic Compounds (GC) (Continued)

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Difluorobenzene (Surr)	*88*		*70 - 130*	*07/11/23 12:27*	*07/12/23 02:30*	*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			07/12/23 14:53	1

Method: SW846 8015 NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**76.6**		50.4		mg/Kg			07/17/23 10:54	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	<50.4	U	50.4		mg/Kg		07/12/23 11:56	07/17/23 00:28	1
Diesel Range Organics (Over C10-C28)	**76.6**		50.4		mg/Kg		07/12/23 11:56	07/17/23 00:28	1
OII Range Organics (Over C28-C36)	<50.4	U	50.4		mg/Kg		07/12/23 11:56	07/17/23 00:28	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*106*		*70 - 130*	*07/12/23 11:56*	*07/17/23 00:28*	*1*
o-Terphenyl	*114*		*70 - 130*	*07/12/23 11:56*	*07/17/23 00:28*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**2160**		25.0		mg/Kg			07/11/23 21:29	5

Client Sample ID: BES23-08 0.5'

Lab Sample ID: 890-4917-8
Matrix: Solid
Date Collected: 07/07/23 09:35
Date Received: 07/07/23 16:20
Sample Depth: 0.5

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		07/11/23 12:27	07/12/23 02:56	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		07/11/23 12:27	07/12/23 02:56	1
Toluene	<0.00199	U	0.00199		mg/Kg		07/11/23 12:27	07/12/23 02:56	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		07/11/23 12:27	07/12/23 02:56	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		07/11/23 12:27	07/12/23 02:56	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		07/11/23 12:27	07/12/23 02:56	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*114*		*70 - 130*	*07/11/23 12:27*	*07/12/23 02:56*	*1*
1,4-Difluorobenzene (Surr)	*71*		*70 - 130*	*07/11/23 12:27*	*07/12/23 02:56*	*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			07/12/23 14:53	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			07/17/23 10:54	1

Client Sample Results

Client: Vertex
Project/Site: Corral Fly

Job ID: 890-4917-1
SDG: 23E-02502

Client Sample ID: BES23-08 0.5'

Lab Sample ID: 890-4917-8
Matrix: Solid
Date Collected: 07/07/23 09:35
Date Received: 07/07/23 16:20
Sample Depth: 0.5

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		07/12/23 11:56	07/17/23 00:48	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		07/12/23 11:56	07/17/23 00:48	1
OII Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		07/12/23 11:56	07/17/23 00:48	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*106*		*70 - 130*	*07/12/23 11:56*	*07/17/23 00:48*	*1*
o-Terphenyl	*114*		*70 - 130*	*07/12/23 11:56*	*07/17/23 00:48*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**8280**		49.8		mg/Kg			07/11/23 21:34	10

Client Sample ID: BES23-09 0.5'

Lab Sample ID: 890-4917-9
Matrix: Solid
Date Collected: 07/07/23 09:40
Date Received: 07/07/23 16:20
Sample Depth: 0.5

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00198	U	0.00198		mg/Kg		07/11/23 12:27	07/12/23 03:21	1
Ethylbenzene	<0.00198	U	0.00198		mg/Kg		07/11/23 12:27	07/12/23 03:21	1
Toluene	<0.00198	U	0.00198		mg/Kg		07/11/23 12:27	07/12/23 03:21	1
Xylenes, Total	<0.00396	U	0.00396		mg/Kg		07/11/23 12:27	07/12/23 03:21	1
m-Xylene & p-Xylene	<0.00396	U	0.00396		mg/Kg		07/11/23 12:27	07/12/23 03:21	1
o-Xylene	<0.00198	U	0.00198		mg/Kg		07/11/23 12:27	07/12/23 03:21	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*131*	*S1+*	*70 - 130*	*07/11/23 12:27*	*07/12/23 03:21*	*1*
1,4-Difluorobenzene (Surr)	*89*		*70 - 130*	*07/11/23 12:27*	*07/12/23 03:21*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00396	U	0.00396		mg/Kg			07/12/23 14:53	1

Method: SW846 8015 NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**166**		50.2		mg/Kg			07/17/23 10:54	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	<50.2	U	50.2		mg/Kg		07/12/23 11:56	07/17/23 01:08	1
Diesel Range Organics (Over C10-C28)	**166**		50.2		mg/Kg		07/12/23 11:56	07/17/23 01:08	1
OII Range Organics (Over C28-C36)	<50.2	U	50.2		mg/Kg		07/12/23 11:56	07/17/23 01:08	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*98*		*70 - 130*	*07/12/23 11:56*	*07/17/23 01:08*	*1*
o-Terphenyl	*105*		*70 - 130*	*07/12/23 11:56*	*07/17/23 01:08*	*1*

Client Sample Results

Client: Vertex
Project/Site: Corral Fly

Job ID: 890-4917-1
SDG: 23E-02502

Client Sample ID: BES23-09 0.5'

Lab Sample ID: 890-4917-9
Matrix: Solid
Date Collected: 07/07/23 09:40
Date Received: 07/07/23 16:20
Sample Depth: 0.5

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	9680		99.2		mg/Kg			07/11/23 21:40	20

Client Sample ID: BES23-10 0.5'

Lab Sample ID: 890-4917-10
Matrix: Solid
Date Collected: 07/07/23 09:45
Date Received: 07/07/23 16:20
Sample Depth: 0.5

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		07/11/23 12:27	07/12/23 03:46	1
Ethylbenzene	<0.00202	U	0.00202		mg/Kg		07/11/23 12:27	07/12/23 03:46	1
Toluene	<0.00202	U	0.00202		mg/Kg		07/11/23 12:27	07/12/23 03:46	1
Xylenes, Total	<0.00404	U	0.00404		mg/Kg		07/11/23 12:27	07/12/23 03:46	1
m-Xylene & p-Xylene	<0.00404	U	0.00404		mg/Kg		07/11/23 12:27	07/12/23 03:46	1
o-Xylene	<0.00202	U	0.00202		mg/Kg		07/11/23 12:27	07/12/23 03:46	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*120*		*70 - 130*	*07/11/23 12:27*	*07/12/23 03:46*	*1*
1,4-Difluorobenzene (Surr)	*83*		*70 - 130*	*07/11/23 12:27*	*07/12/23 03:46*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00404	U	0.00404		mg/Kg			07/12/23 14:53	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			07/17/23 10:54	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		07/12/23 11:56	07/17/23 01:28	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		07/12/23 11:56	07/17/23 01:28	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		07/12/23 11:56	07/17/23 01:28	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*89*		*70 - 130*	*07/12/23 11:56*	*07/17/23 01:28*	*1*
o-Terphenyl	*97*		*70 - 130*	*07/12/23 11:56*	*07/17/23 01:28*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	8100		50.2		mg/Kg			07/11/23 21:45	10

Client Sample Results

Client: Vertex
Project/Site: Corral Fly

Job ID: 890-4917-1
SDG: 23E-02502

Client Sample ID: BES23-11 0.5'

Lab Sample ID: 890-4917-11
Matrix: Solid
Date Collected: 07/07/23 09:50
Date Received: 07/07/23 16:20
Sample Depth: 0.5

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		07/11/23 12:27	07/12/23 05:28	1
Ethylbenzene	<0.00201	U	0.00201		mg/Kg		07/11/23 12:27	07/12/23 05:28	1
Toluene	<0.00201	U	0.00201		mg/Kg		07/11/23 12:27	07/12/23 05:28	1
Xylenes, Total	<0.00402	U	0.00402		mg/Kg		07/11/23 12:27	07/12/23 05:28	1
m-Xylene & p-Xylene	<0.00402	U	0.00402		mg/Kg		07/11/23 12:27	07/12/23 05:28	1
o-Xylene	<0.00201	U	0.00201		mg/Kg		07/11/23 12:27	07/12/23 05:28	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*126*		*70 - 130*	*07/11/23 12:27*	*07/12/23 05:28*	*1*
1,4-Difluorobenzene (Surr)	*121*		*70 - 130*	*07/11/23 12:27*	*07/12/23 05:28*	*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			07/12/23 14:53	1

Method: SW846 8015 NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.2	U	50.2		mg/Kg			07/17/23 10:54	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	<50.2	U	50.2		mg/Kg		07/12/23 11:56	07/17/23 02:08	1
Diesel Range Organics (Over C10-C28)	<50.2	U	50.2		mg/Kg		07/12/23 11:56	07/17/23 02:08	1
OII Range Organics (Over C28-C36)	<50.2	U	50.2		mg/Kg		07/12/23 11:56	07/17/23 02:08	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*94*		*70 - 130*	*07/12/23 11:56*	*07/17/23 02:08*	*1*
o-Terphenyl	*97*		*70 - 130*	*07/12/23 11:56*	*07/17/23 02:08*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**9660**		99.4		mg/Kg			07/11/23 21:50	20

Client Sample ID: BES23-12 0.5'

Lab Sample ID: 890-4917-12
Matrix: Solid
Date Collected: 07/07/23 09:55
Date Received: 07/07/23 16:20
Sample Depth: 0.5

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		07/11/23 12:27	07/12/23 05:54	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		07/11/23 12:27	07/12/23 05:54	1
Toluene	<0.00200	U	0.00200		mg/Kg		07/11/23 12:27	07/12/23 05:54	1
Xylenes, Total	<0.00401	U	0.00401		mg/Kg		07/11/23 12:27	07/12/23 05:54	1
m-Xylene & p-Xylene	<0.00401	U	0.00401		mg/Kg		07/11/23 12:27	07/12/23 05:54	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		07/11/23 12:27	07/12/23 05:54	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*124*		*70 - 130*	*07/11/23 12:27*	*07/12/23 05:54*	*1*

Client Sample Results

Client: Vertex
Project/Site: Corral Fly

Job ID: 890-4917-1
SDG: 23E-02502

Client Sample ID: BES23-12 0.5'

Lab Sample ID: 890-4917-12
Matrix: Solid
Date Collected: 07/07/23 09:55
Date Received: 07/07/23 16:20
Sample Depth: 0.5

Method: SW846 8021B - Volatile Organic Compounds (GC) (Continued)

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Difluorobenzene (Surr)	*78*		*70 - 130*	*07/11/23 12:27*	*07/12/23 05:54*	*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			07/12/23 14:53	1

Method: SW846 8015 NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**181**		50.5		mg/Kg			07/17/23 10:54	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	<50.5	U	50.5		mg/Kg		07/12/23 11:56	07/17/23 02:28	1
Diesel Range Organics (Over C10-C28)	**181**		50.5		mg/Kg		07/12/23 11:56	07/17/23 02:28	1
OII Range Organics (Over C28-C36)	<50.5	U	50.5		mg/Kg		07/12/23 11:56	07/17/23 02:28	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*106*		*70 - 130*	*07/12/23 11:56*	*07/17/23 02:28*	*1*
o-Terphenyl	*109*		*70 - 130*	*07/12/23 11:56*	*07/17/23 02:28*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**8590**		50.0		mg/Kg			07/11/23 22:05	10

Client Sample ID: BES23-13 0.5'

Lab Sample ID: 890-4917-13
Matrix: Solid
Date Collected: 07/07/23 10:00
Date Received: 07/07/23 16:20
Sample Depth: 0.5

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		07/11/23 12:27	07/12/23 06:20	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		07/11/23 12:27	07/12/23 06:20	1
Toluene	<0.00200	U	0.00200		mg/Kg		07/11/23 12:27	07/12/23 06:20	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		07/11/23 12:27	07/12/23 06:20	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		07/11/23 12:27	07/12/23 06:20	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		07/11/23 12:27	07/12/23 06:20	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*108*		*70 - 130*	*07/11/23 12:27*	*07/12/23 06:20*	*1*
1,4-Difluorobenzene (Surr)	*70*		*70 - 130*	*07/11/23 12:27*	*07/12/23 06:20*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00400	U	0.00400		mg/Kg			07/12/23 14:53	1

Method: SW846 8015 NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**64.6**		50.5		mg/Kg			07/17/23 10:54	1

Client Sample Results

Client: Vertex
Project/Site: Corral Fly

Job ID: 890-4917-1
SDG: 23E-02502

Client Sample ID: BES23-13 0.5'

Lab Sample ID: 890-4917-13
Matrix: Solid
Date Collected: 07/07/23 10:00
Date Received: 07/07/23 16:20
Sample Depth: 0.5

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	<50.5	U	50.5		mg/Kg		07/12/23 11:56	07/17/23 02:48	1
Diesel Range Organics (Over C10-C28)	**64.6**		50.5		mg/Kg		07/12/23 11:56	07/17/23 02:48	1
OII Range Organics (Over C28-C36)	<50.5	U	50.5		mg/Kg		07/12/23 11:56	07/17/23 02:48	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*89*		*70 - 130*	*07/12/23 11:56*	*07/17/23 02:48*	*1*
o-Terphenyl	*96*		*70 - 130*	*07/12/23 11:56*	*07/17/23 02:48*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**9500**		99.8		mg/Kg			07/11/23 22:10	20

Client Sample ID: BES23-14 0.5'

Lab Sample ID: 890-4917-14
Matrix: Solid
Date Collected: 07/07/23 10:05
Date Received: 07/07/23 16:20
Sample Depth: 0.5

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		07/11/23 12:27	07/12/23 06:45	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		07/11/23 12:27	07/12/23 06:45	1
Toluene	<0.00199	U	0.00199		mg/Kg		07/11/23 12:27	07/12/23 06:45	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		07/11/23 12:27	07/12/23 06:45	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		07/11/23 12:27	07/12/23 06:45	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		07/11/23 12:27	07/12/23 06:45	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*122*		*70 - 130*	*07/11/23 12:27*	*07/12/23 06:45*	*1*
1,4-Difluorobenzene (Surr)	*70*		*70 - 130*	*07/11/23 12:27*	*07/12/23 06:45*	*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			07/12/23 14:53	1

Method: SW846 8015 NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**61.7**		50.1		mg/Kg			07/17/23 10:54	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	<50.1	U	50.1		mg/Kg		07/12/23 11:56	07/17/23 03:08	1
Diesel Range Organics (Over C10-C28)	**61.7**		50.1		mg/Kg		07/12/23 11:56	07/17/23 03:08	1
OII Range Organics (Over C28-C36)	<50.1	U	50.1		mg/Kg		07/12/23 11:56	07/17/23 03:08	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*85*		*70 - 130*	*07/12/23 11:56*	*07/17/23 03:08*	*1*
o-Terphenyl	*89*		*70 - 130*	*07/12/23 11:56*	*07/17/23 03:08*	*1*

Client Sample Results

Client: Vertex
Project/Site: Corral Fly

Job ID: 890-4917-1
SDG: 23E-02502

Client Sample ID: BES23-14 0.5'

Lab Sample ID: 890-4917-14
Matrix: Solid
Date Collected: 07/07/23 10:05
Date Received: 07/07/23 16:20
Sample Depth: 0.5

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	1040		25.1		mg/Kg			07/11/23 22:26	5

Client Sample ID: BES23-15 0.5'

Lab Sample ID: 890-4917-15
Matrix: Solid
Date Collected: 07/07/23 10:10
Date Received: 07/07/23 16:20
Sample Depth: 0.5

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		07/11/23 12:27	07/12/23 07:12	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		07/11/23 12:27	07/12/23 07:12	1
Toluene	<0.00200	U	0.00200		mg/Kg		07/11/23 12:27	07/12/23 07:12	1
Xylenes, Total	<0.00399	U	0.00399		mg/Kg		07/11/23 12:27	07/12/23 07:12	1
m-Xylene & p-Xylene	<0.00399	U	0.00399		mg/Kg		07/11/23 12:27	07/12/23 07:12	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		07/11/23 12:27	07/12/23 07:12	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*119*		*70 - 130*	*07/11/23 12:27*	*07/12/23 07:12*	*1*
1,4-Difluorobenzene (Surr)	*84*		*70 - 130*	*07/11/23 12:27*	*07/12/23 07:12*	*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			07/12/23 14:53	1

Method: SW846 8015 NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.1	U	50.1		mg/Kg			07/17/23 10:54	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	<50.1	U	50.1		mg/Kg		07/12/23 11:56	07/17/23 03:28	1
Diesel Range Organics (Over C10-C28)	<50.1	U	50.1		mg/Kg		07/12/23 11:56	07/17/23 03:28	1
OII Range Organics (Over C28-C36)	<50.1	U	50.1		mg/Kg		07/12/23 11:56	07/17/23 03:28	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*88*		*70 - 130*	*07/12/23 11:56*	*07/17/23 03:28*	*1*
o-Terphenyl	*96*		*70 - 130*	*07/12/23 11:56*	*07/17/23 03:28*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	10200		101		mg/Kg			07/11/23 22:31	20

Client Sample Results

Client: Vertex
Project/Site: Corral Fly

Job ID: 890-4917-1
SDG: 23E-02502

Client Sample ID: BES23-16 0.5'

Lab Sample ID: 890-4917-16
Matrix: Solid
Date Collected: 07/07/23 10:15
Date Received: 07/07/23 16:20
Sample Depth: 0.5

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		07/11/23 12:27	07/12/23 07:38	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		07/11/23 12:27	07/12/23 07:38	1
Toluene	<0.00199	U	0.00199		mg/Kg		07/11/23 12:27	07/12/23 07:38	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		07/11/23 12:27	07/12/23 07:38	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		07/11/23 12:27	07/12/23 07:38	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		07/11/23 12:27	07/12/23 07:38	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*132*	*S1+*	*70 - 130*	*07/11/23 12:27*	*07/12/23 07:38*	*1*
1,4-Difluorobenzene (Surr)	*74*		*70 - 130*	*07/11/23 12:27*	*07/12/23 07:38*	*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			07/12/23 14:53	1

Method: SW846 8015 NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**59.1**		49.5		mg/Kg			07/17/23 10:54	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	<49.5	U	49.5		mg/Kg		07/12/23 11:56	07/17/23 03:48	1
Diesel Range Organics (Over C10-C28)	**59.1**		49.5		mg/Kg		07/12/23 11:56	07/17/23 03:48	1
OII Range Organics (Over C28-C36)	<49.5	U	49.5		mg/Kg		07/12/23 11:56	07/17/23 03:48	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*102*		*70 - 130*	*07/12/23 11:56*	*07/17/23 03:48*	*1*
o-Terphenyl	*110*		*70 - 130*	*07/12/23 11:56*	*07/17/23 03:48*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**1730**		25.0		mg/Kg			07/11/23 22:36	5

Client Sample ID: BES23-17 0.5'

Lab Sample ID: 890-4917-17
Matrix: Solid
Date Collected: 07/07/23 10:20
Date Received: 07/07/23 16:20
Sample Depth: 0.5

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00198	U	0.00198		mg/Kg		07/11/23 12:27	07/12/23 08:03	1
Ethylbenzene	<0.00198	U	0.00198		mg/Kg		07/11/23 12:27	07/12/23 08:03	1
Toluene	<0.00198	U	0.00198		mg/Kg		07/11/23 12:27	07/12/23 08:03	1
Xylenes, Total	<0.00397	U	0.00397		mg/Kg		07/11/23 12:27	07/12/23 08:03	1
m-Xylene & p-Xylene	<0.00397	U	0.00397		mg/Kg		07/11/23 12:27	07/12/23 08:03	1
o-Xylene	<0.00198	U	0.00198		mg/Kg		07/11/23 12:27	07/12/23 08:03	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*117*		*70 - 130*	*07/11/23 12:27*	*07/12/23 08:03*	*1*

Client Sample Results

Client: Vertex
Project/Site: Corral Fly

Job ID: 890-4917-1
SDG: 23E-02502

Client Sample ID: BES23-17 0.5'

Lab Sample ID: 890-4917-17
Matrix: Solid
Date Collected: 07/07/23 10:20
Date Received: 07/07/23 16:20
Sample Depth: 0.5

Method: SW846 8021B - Volatile Organic Compounds (GC) (Continued)

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Difluorobenzene (Surr)	*79*		*70 - 130*	*07/11/23 12:27*	*07/12/23 08:03*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00397	U	0.00397		mg/Kg			07/12/23 14:53	1

Method: SW846 8015 NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**166**		49.6		mg/Kg			07/17/23 10:54	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	<49.6	U	49.6		mg/Kg		07/12/23 11:56	07/17/23 04:09	1
Diesel Range Organics (Over C10-C28)	**166**		49.6		mg/Kg		07/12/23 11:56	07/17/23 04:09	1
OII Range Organics (Over C28-C36)	<49.6	U	49.6		mg/Kg		07/12/23 11:56	07/17/23 04:09	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*88*		*70 - 130*	*07/12/23 11:56*	*07/17/23 04:09*	*1*
o-Terphenyl	*93*		*70 - 130*	*07/12/23 11:56*	*07/17/23 04:09*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**4250**		50.1		mg/Kg			07/11/23 22:42	10

Client Sample ID: BES23-18 0.5'

Lab Sample ID: 890-4917-18
Matrix: Solid
Date Collected: 07/07/23 10:25
Date Received: 07/07/23 16:20
Sample Depth: 0.5

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		07/11/23 12:27	07/12/23 08:47	1
Ethylbenzene	<0.00202	U	0.00202		mg/Kg		07/11/23 12:27	07/12/23 08:47	1
Toluene	<0.00202	U	0.00202		mg/Kg		07/11/23 12:27	07/12/23 08:47	1
Xylenes, Total	<0.00403	U	0.00403		mg/Kg		07/11/23 12:27	07/12/23 08:47	1
m-Xylene & p-Xylene	<0.00403	U	0.00403		mg/Kg		07/11/23 12:27	07/12/23 08:47	1
o-Xylene	<0.00202	U	0.00202		mg/Kg		07/11/23 12:27	07/12/23 08:47	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*120*		*70 - 130*	*07/11/23 12:27*	*07/12/23 08:47*	*1*
1,4-Difluorobenzene (Surr)	*81*		*70 - 130*	*07/11/23 12:27*	*07/12/23 08:47*	*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			07/12/23 14:53	1

Method: SW846 8015 NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**78.3**		49.8		mg/Kg			07/17/23 10:54	1

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Client Sample Results

Client: Vertex
Project/Site: Corral Fly

Job ID: 890-4917-1
SDG: 23E-02502

Client Sample ID: BES23-18 0.5'

Lab Sample ID: 890-4917-18
Matrix: Solid
Date Collected: 07/07/23 10:25
Date Received: 07/07/23 16:20
Sample Depth: 0.5

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		07/12/23 11:56	07/17/23 04:29	1
Diesel Range Organics (Over C10-C28)	**78.3**		49.8		mg/Kg		07/12/23 11:56	07/17/23 04:29	1
OII Range Organics (Over C28-C36)	<49.8	U	49.8		mg/Kg		07/12/23 11:56	07/17/23 04:29	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*101*		*70 - 130*	*07/12/23 11:56*	*07/17/23 04:29*	*1*
o-Terphenyl	*102*		*70 - 130*	*07/12/23 11:56*	*07/17/23 04:29*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**2160**		49.9		mg/Kg			07/11/23 22:47	10

Client Sample ID: BES23-19 0.5'

Lab Sample ID: 890-4917-19
Matrix: Solid
Date Collected: 07/07/23 10:30
Date Received: 07/07/23 16:20
Sample Depth: 0.5

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		07/11/23 12:27	07/12/23 09:12	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		07/11/23 12:27	07/12/23 09:12	1
Toluene	<0.00199	U	0.00199		mg/Kg		07/11/23 12:27	07/12/23 09:12	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		07/11/23 12:27	07/12/23 09:12	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		07/11/23 12:27	07/12/23 09:12	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		07/11/23 12:27	07/12/23 09:12	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*115*		*70 - 130*	*07/11/23 12:27*	*07/12/23 09:12*	*1*
1,4-Difluorobenzene (Surr)	*74*		*70 - 130*	*07/11/23 12:27*	*07/12/23 09:12*	*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			07/12/23 14:53	1

Method: SW846 8015 NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**58.0**		49.9		mg/Kg			07/17/23 10:54	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		07/12/23 11:56	07/17/23 04:49	1
Diesel Range Organics (Over C10-C28)	**58.0**		49.9		mg/Kg		07/12/23 11:56	07/17/23 04:49	1
OII Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		07/12/23 11:56	07/17/23 04:49	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*87*		*70 - 130*	*07/12/23 11:56*	*07/17/23 04:49*	*1*
o-Terphenyl	*94*		*70 - 130*	*07/12/23 11:56*	*07/17/23 04:49*	*1*

Client Sample Results

Client: Vertex
Project/Site: Corral Fly

Job ID: 890-4917-1
SDG: 23E-02502

Client Sample ID: BES23-19 0.5'

Lab Sample ID: 890-4917-19
Matrix: Solid
Date Collected: 07/07/23 10:30
Date Received: 07/07/23 16:20
Sample Depth: 0.5

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**10300**		99.8		mg/Kg			07/11/23 22:52	20

Client Sample ID: BES23-20 0.5'

Lab Sample ID: 890-4917-20
Matrix: Solid
Date Collected: 07/07/23 10:35
Date Received: 07/07/23 16:20
Sample Depth: 0.5

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00198	U	0.00198		mg/Kg		07/11/23 12:27	07/12/23 09:38	1
Ethylbenzene	<0.00198	U	0.00198		mg/Kg		07/11/23 12:27	07/12/23 09:38	1
Toluene	<0.00198	U	0.00198		mg/Kg		07/11/23 12:27	07/12/23 09:38	1
Xylenes, Total	<0.00396	U	0.00396		mg/Kg		07/11/23 12:27	07/12/23 09:38	1
m-Xylene & p-Xylene	<0.00396	U	0.00396		mg/Kg		07/11/23 12:27	07/12/23 09:38	1
o-Xylene	<0.00198	U	0.00198		mg/Kg		07/11/23 12:27	07/12/23 09:38	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*115*		*70 - 130*	*07/11/23 12:27*	*07/12/23 09:38*	*1*
1,4-Difluorobenzene (Surr)	*81*		*70 - 130*	*07/11/23 12:27*	*07/12/23 09:38*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00396	U	0.00396		mg/Kg			07/12/23 14:53	1

Method: SW846 8015 NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**94.3**		49.9		mg/Kg			07/17/23 10:54	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		07/12/23 11:56	07/17/23 05:09	1
Diesel Range Organics (Over C10-C28)	**94.3**		49.9		mg/Kg		07/12/23 11:56	07/17/23 05:09	1
OII Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		07/12/23 11:56	07/17/23 05:09	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*93*		*70 - 130*	*07/12/23 11:56*	*07/17/23 05:09*	*1*
o-Terphenyl	*96*		*70 - 130*	*07/12/23 11:56*	*07/17/23 05:09*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**7320**		49.8		mg/Kg			07/11/23 22:57	10

Surrogate Summary

Client: Vertex
Project/Site: Corral Fly

Job ID: 890-4917-1
SDG: 23E-02502

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)
890-4917-1	BES23-01 0.5'	100	80
890-4917-1 MS	BES23-01 0.5'	113	82
890-4917-1 MSD	BES23-01 0.5'	122	97
890-4917-2	BES23-02 0.5'	107	79
890-4917-3	BES23-03 0.5'	121	85
890-4917-4	BES23-04 0.5'	128	87
890-4917-5	BES23-05 0.5'	105	85
890-4917-6	BES23-06 0.5'	113	86
890-4917-7	BES23-07 0.5'	127	88
890-4917-8	BES23-08 0.5'	114	71
890-4917-9	BES23-09 0.5'	131 S1+	89
890-4917-10	BES23-10 0.5'	120	83
890-4917-11	BES23-11 0.5'	126	121
890-4917-12	BES23-12 0.5'	124	78
890-4917-13	BES23-13 0.5'	108	70
890-4917-14	BES23-14 0.5'	122	70
890-4917-15	BES23-15 0.5'	119	84
890-4917-16	BES23-16 0.5'	132 S1+	74
890-4917-17	BES23-17 0.5'	117	79
890-4917-18	BES23-18 0.5'	120	81
890-4917-19	BES23-19 0.5'	115	74
890-4917-20	BES23-20 0.5'	115	81
LCS 880-57409/1-A	Lab Control Sample	102	88
LCSD 880-57409/2-A	Lab Control Sample Dup	101	91
MB 880-57409/5-A	Method Blank	64 S1-	80
MB 880-57424/8	Method Blank	61 S1-	78

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)
890-4917-1	BES23-01 0.5'	92	99
890-4917-1 MS	BES23-01 0.5'	93	89
890-4917-1 MSD	BES23-01 0.5'	101	99
890-4917-2	BES23-02 0.5'	108	116
890-4917-3	BES23-03 0.5'	105	112
890-4917-4	BES23-04 0.5'	89	94
890-4917-5	BES23-05 0.5'	103	113
890-4917-6	BES23-06 0.5'	93	100
890-4917-7	BES23-07 0.5'	106	114
890-4917-8	BES23-08 0.5'	106	114
890-4917-9	BES23-09 0.5'	98	105
890-4917-10	BES23-10 0.5'	89	97
890-4917-11	BES23-11 0.5'	94	97

Surrogate Summary

Client: Vertex Job ID: 890-4917-1
Project/Site: Corral Fly SDG: 23E-02502

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)								
890-4917-12	BES23-12 0.5'	106	109								
890-4917-13	BES23-13 0.5'	89	96								
890-4917-14	BES23-14 0.5'	85	89								
890-4917-15	BES23-15 0.5'	88	96								
890-4917-16	BES23-16 0.5'	102	110								
890-4917-17	BES23-17 0.5'	88	93								
890-4917-18	BES23-18 0.5'	101	102								
890-4917-19	BES23-19 0.5'	87	94								
890-4917-20	BES23-20 0.5'	93	96								
LCS 880-57500/2-A	Lab Control Sample	98	93								
LCSD 880-57500/3-A	Lab Control Sample Dup	98	92								
MB 880-57500/1-A	Method Blank	91	101								

Surrogate Legend

1CO = 1-Chlorooctane

OTPH = o-Terphenyl

QC Sample Results

Client: Vertex
Project/Site: Corral Fly

Job ID: 890-4917-1
SDG: 23E-02502

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-57409/5-A
Matrix: Solid
Analysis Batch: 57424

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 57409

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		07/11/23 12:27	07/11/23 23:35	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		07/11/23 12:27	07/11/23 23:35	1
Toluene	<0.00200	U	0.00200		mg/Kg		07/11/23 12:27	07/11/23 23:35	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		07/11/23 12:27	07/11/23 23:35	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		07/11/23 12:27	07/11/23 23:35	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		07/11/23 12:27	07/11/23 23:35	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*64*	*S1-*	*70 - 130*	*07/11/23 12:27*	*07/11/23 23:35*	*1*
1,4-Difluorobenzene (Surr)	*80*		*70 - 130*	*07/11/23 12:27*	*07/11/23 23:35*	*1*

Lab Sample ID: LCS 880-57409/1-A
Matrix: Solid
Analysis Batch: 57424

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 57409

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene			0.100	0.09230		mg/Kg		92	70 - 130		
Ethylbenzene			0.100	0.09674		mg/Kg		97	70 - 130		
Toluene			0.100	0.08546		mg/Kg		85	70 - 130		
m-Xylene & p-Xylene			0.200	0.1770		mg/Kg		88	70 - 130		
o-Xylene			0.100	0.09118		mg/Kg		91	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*102*		*70 - 130*
1,4-Difluorobenzene (Surr)	*88*		*70 - 130*

Lab Sample ID: LCSD 880-57409/2-A
Matrix: Solid
Analysis Batch: 57424

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 57409

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene			0.100	0.08799		mg/Kg		88	70 - 130	5	35
Ethylbenzene			0.100	0.09432		mg/Kg		94	70 - 130	3	35
Toluene			0.100	0.08412		mg/Kg		84	70 - 130	2	35
m-Xylene & p-Xylene			0.200	0.1716		mg/Kg		86	70 - 130	3	35
o-Xylene			0.100	0.09119		mg/Kg		91	70 - 130	0	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*101*		*70 - 130*
1,4-Difluorobenzene (Surr)	*91*		*70 - 130*

Lab Sample ID: 890-4917-1 MS
Matrix: Solid
Analysis Batch: 57424

Client Sample ID: BES23-01 0.5'
Prep Type: Total/NA
Prep Batch: 57409

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene	<0.00202	U	0.0994	0.09073		mg/Kg		91	70 - 130		
Ethylbenzene	<0.00202	U	0.0994	0.09014		mg/Kg		91	70 - 130		

QC Sample Results

Client: Vertex
Project/Site: Corral Fly

Job ID: 890-4917-1
SDG: 23E-02502

Method: 8021B - Volatile Organic Compounds (GC) (Continued)

Lab Sample ID: 890-4917-1 MS
Matrix: Solid
Analysis Batch: 57424

Client Sample ID: BES23-01 0.5'
Prep Type: Total/NA
Prep Batch: 57409

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Toluene	<0.00202	U	0.0994	0.07793		mg/Kg		78	70 - 130
m-Xylene & p-Xylene	<0.00404	U	0.199	0.1624		mg/Kg		82	70 - 130
o-Xylene	<0.00202	U	0.0994	0.08857		mg/Kg		89	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*113*		*70 - 130*
1,4-Difluorobenzene (Surr)	*82*		*70 - 130*

Lab Sample ID: 890-4917-1 MSD
Matrix: Solid
Analysis Batch: 57424

Client Sample ID: BES23-01 0.5'
Prep Type: Total/NA
Prep Batch: 57409

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	<0.00202	U	0.0998	0.08603		mg/Kg		86	70 - 130	5	35
Ethylbenzene	<0.00202	U	0.0998	0.08714		mg/Kg		87	70 - 130	3	35
Toluene	<0.00202	U	0.0998	0.07956		mg/Kg		80	70 - 130	2	35
m-Xylene & p-Xylene	<0.00404	U	0.200	0.1554		mg/Kg		78	70 - 130	4	35
o-Xylene	<0.00202	U	0.0998	0.08154		mg/Kg		82	70 - 130	8	35

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*122*		*70 - 130*
1,4-Difluorobenzene (Surr)	*97*		*70 - 130*

Lab Sample ID: MB 880-57424/8
Matrix: Solid
Analysis Batch: 57424

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg			07/11/23 19:21	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg			07/11/23 19:21	1
Toluene	<0.00200	U	0.00200		mg/Kg			07/11/23 19:21	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg			07/11/23 19:21	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg			07/11/23 19:21	1
o-Xylene	<0.00200	U	0.00200		mg/Kg			07/11/23 19:21	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*61*	*S1-*	*70 - 130*		*07/11/23 19:21*	*1*
1,4-Difluorobenzene (Surr)	*78*		*70 - 130*		*07/11/23 19:21*	*1*

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

Lab Sample ID: MB 880-57500/1-A
Matrix: Solid
Analysis Batch: 57755

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 57500

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		07/12/23 11:56	07/16/23 20:46	1

QC Sample Results

Client: Vertex
Project/Site: Corral Fly

Job ID: 890-4917-1
SDG: 23E-02502

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

Lab Sample ID: MB 880-57500/1-A
Matrix: Solid
Analysis Batch: 57755

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 57500

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		07/12/23 11:56	07/16/23 20:46	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		07/12/23 11:56	07/16/23 20:46	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*91*		*70 - 130*	*07/12/23 11:56*	*07/16/23 20:46*	*1*
o-Terphenyl	*101*		*70 - 130*	*07/12/23 11:56*	*07/16/23 20:46*	*1*

Lab Sample ID: LCS 880-57500/2-A
Matrix: Solid
Analysis Batch: 57755

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 57500

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics (GRO)-C6-C10	1000	1014		mg/Kg		101	70 - 130
Diesel Range Organics (Over C10-C28)	1000	942.2		mg/Kg		94	70 - 130

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1-Chlorooctane	*98*		*70 - 130*
o-Terphenyl	*93*		*70 - 130*

Lab Sample ID: LCSD 880-57500/3-A
Matrix: Solid
Analysis Batch: 57755

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 57500

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	1000	993.2		mg/Kg		99	70 - 130	2	20
Diesel Range Organics (Over C10-C28)	1000	948.3		mg/Kg		95	70 - 130	1	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1-Chlorooctane	*98*		*70 - 130*
o-Terphenyl	*92*		*70 - 130*

Lab Sample ID: 890-4917-1 MS
Matrix: Solid
Analysis Batch: 57755

Client Sample ID: BES23-01 0.5'
Prep Type: Total/NA
Prep Batch: 57500

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics (GRO)-C6-C10	<49.7	U	1010	928.0		mg/Kg		92	70 - 130
Diesel Range Organics (Over C10-C28)	145	F1	1010	846.6	F1	mg/Kg		69	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
1-Chlorooctane	*93*		*70 - 130*
o-Terphenyl	*89*		*70 - 130*

QC Sample Results

Client: Vertex
Project/Site: Corral Fly

Job ID: 890-4917-1
SDG: 23E-02502

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

Lab Sample ID: 890-4917-1 MSD
Matrix: Solid
Analysis Batch: 57755

Client Sample ID: BES23-01 0.5'
Prep Type: Total/NA
Prep Batch: 57500

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	<49.7	U	1010	1116		mg/Kg		111	70 - 130	18	20
Diesel Range Organics (Over C10-C28)	145	F1	1010	946.6		mg/Kg		79	70 - 130	11	20

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
1-Chlorooctane	*101*		*70 - 130*
o-Terphenyl	*99*		*70 - 130*

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-57318/1-A
Matrix: Solid
Analysis Batch: 57419

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			07/11/23 20:23	1

Lab Sample ID: LCS 880-57318/2-A
Matrix: Solid
Analysis Batch: 57419

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	250	253.6		mg/Kg		101	90 - 110

Lab Sample ID: LCSD 880-57318/3-A
Matrix: Solid
Analysis Batch: 57419

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	254.9		mg/Kg		102	90 - 110	0	20

Lab Sample ID: 890-4917-1 MS
Matrix: Solid
Analysis Batch: 57419

Client Sample ID: BES23-01 0.5'
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	7870		2510	10290		mg/Kg		96	90 - 110

Lab Sample ID: 890-4917-1 MSD
Matrix: Solid
Analysis Batch: 57419

Client Sample ID: BES23-01 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	7870		2510	10300		mg/Kg		97	90 - 110	0	20

QC Sample Results

Client: Vertex
Project/Site: Corral Fly

Job ID: 890-4917-1
SDG: 23E-02502

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: 890-4917-11 MS
Matrix: Solid
Analysis Batch: 57419

Client Sample ID: BES23-11 0.5'
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	9660		4970	14620		mg/Kg		100	90 - 110

Lab Sample ID: 890-4917-11 MSD
Matrix: Solid
Analysis Batch: 57419

Client Sample ID: BES23-11 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	9660		4970	14640		mg/Kg		100	90 - 110	0	20

QC Association Summary

Client: Vertex
Project/Site: Corral Fly

Job ID: 890-4917-1
SDG: 23E-02502

GC VOA

Prep Batch: 57409

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4917-1	BES23-01 0.5'	Total/NA	Solid	5035	
890-4917-2	BES23-02 0.5'	Total/NA	Solid	5035	
890-4917-3	BES23-03 0.5'	Total/NA	Solid	5035	
890-4917-4	BES23-04 0.5'	Total/NA	Solid	5035	
890-4917-5	BES23-05 0.5'	Total/NA	Solid	5035	
890-4917-6	BES23-06 0.5'	Total/NA	Solid	5035	
890-4917-7	BES23-07 0.5'	Total/NA	Solid	5035	
890-4917-8	BES23-08 0.5'	Total/NA	Solid	5035	
890-4917-9	BES23-09 0.5'	Total/NA	Solid	5035	
890-4917-10	BES23-10 0.5'	Total/NA	Solid	5035	
890-4917-11	BES23-11 0.5'	Total/NA	Solid	5035	
890-4917-12	BES23-12 0.5'	Total/NA	Solid	5035	
890-4917-13	BES23-13 0.5'	Total/NA	Solid	5035	
890-4917-14	BES23-14 0.5'	Total/NA	Solid	5035	
890-4917-15	BES23-15 0.5'	Total/NA	Solid	5035	
890-4917-16	BES23-16 0.5'	Total/NA	Solid	5035	
890-4917-17	BES23-17 0.5'	Total/NA	Solid	5035	
890-4917-18	BES23-18 0.5'	Total/NA	Solid	5035	
890-4917-19	BES23-19 0.5'	Total/NA	Solid	5035	
890-4917-20	BES23-20 0.5'	Total/NA	Solid	5035	
MB 880-57409/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-57409/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-57409/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
890-4917-1 MS	BES23-01 0.5'	Total/NA	Solid	5035	
890-4917-1 MSD	BES23-01 0.5'	Total/NA	Solid	5035	

Analysis Batch: 57424

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4917-1	BES23-01 0.5'	Total/NA	Solid	8021B	57409
890-4917-2	BES23-02 0.5'	Total/NA	Solid	8021B	57409
890-4917-3	BES23-03 0.5'	Total/NA	Solid	8021B	57409
890-4917-4	BES23-04 0.5'	Total/NA	Solid	8021B	57409
890-4917-5	BES23-05 0.5'	Total/NA	Solid	8021B	57409
890-4917-6	BES23-06 0.5'	Total/NA	Solid	8021B	57409
890-4917-7	BES23-07 0.5'	Total/NA	Solid	8021B	57409
890-4917-8	BES23-08 0.5'	Total/NA	Solid	8021B	57409
890-4917-9	BES23-09 0.5'	Total/NA	Solid	8021B	57409
890-4917-10	BES23-10 0.5'	Total/NA	Solid	8021B	57409
890-4917-11	BES23-11 0.5'	Total/NA	Solid	8021B	57409
890-4917-12	BES23-12 0.5'	Total/NA	Solid	8021B	57409
890-4917-13	BES23-13 0.5'	Total/NA	Solid	8021B	57409
890-4917-14	BES23-14 0.5'	Total/NA	Solid	8021B	57409
890-4917-15	BES23-15 0.5'	Total/NA	Solid	8021B	57409
890-4917-16	BES23-16 0.5'	Total/NA	Solid	8021B	57409
890-4917-17	BES23-17 0.5'	Total/NA	Solid	8021B	57409
890-4917-18	BES23-18 0.5'	Total/NA	Solid	8021B	57409
890-4917-19	BES23-19 0.5'	Total/NA	Solid	8021B	57409
890-4917-20	BES23-20 0.5'	Total/NA	Solid	8021B	57409
MB 880-57409/5-A	Method Blank	Total/NA	Solid	8021B	57409
MB 880-57424/8	Method Blank	Total/NA	Solid	8021B	
LCS 880-57409/1-A	Lab Control Sample	Total/NA	Solid	8021B	57409

QC Association Summary

Client: Vertex
Project/Site: Corral Fly

Job ID: 890-4917-1
SDG: 23E-02502

GC VOA (Continued)

Analysis Batch: 57424 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCSD 880-57409/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	57409
890-4917-1 MS	BES23-01 0.5'	Total/NA	Solid	8021B	57409
890-4917-1 MSD	BES23-01 0.5'	Total/NA	Solid	8021B	57409

Analysis Batch: 57527

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4917-1	BES23-01 0.5'	Total/NA	Solid	Total BTEX	
890-4917-2	BES23-02 0.5'	Total/NA	Solid	Total BTEX	
890-4917-3	BES23-03 0.5'	Total/NA	Solid	Total BTEX	
890-4917-4	BES23-04 0.5'	Total/NA	Solid	Total BTEX	
890-4917-5	BES23-05 0.5'	Total/NA	Solid	Total BTEX	
890-4917-6	BES23-06 0.5'	Total/NA	Solid	Total BTEX	
890-4917-7	BES23-07 0.5'	Total/NA	Solid	Total BTEX	
890-4917-8	BES23-08 0.5'	Total/NA	Solid	Total BTEX	
890-4917-9	BES23-09 0.5'	Total/NA	Solid	Total BTEX	
890-4917-10	BES23-10 0.5'	Total/NA	Solid	Total BTEX	
890-4917-11	BES23-11 0.5'	Total/NA	Solid	Total BTEX	
890-4917-12	BES23-12 0.5'	Total/NA	Solid	Total BTEX	
890-4917-13	BES23-13 0.5'	Total/NA	Solid	Total BTEX	
890-4917-14	BES23-14 0.5'	Total/NA	Solid	Total BTEX	
890-4917-15	BES23-15 0.5'	Total/NA	Solid	Total BTEX	
890-4917-16	BES23-16 0.5'	Total/NA	Solid	Total BTEX	
890-4917-17	BES23-17 0.5'	Total/NA	Solid	Total BTEX	
890-4917-18	BES23-18 0.5'	Total/NA	Solid	Total BTEX	
890-4917-19	BES23-19 0.5'	Total/NA	Solid	Total BTEX	
890-4917-20	BES23-20 0.5'	Total/NA	Solid	Total BTEX	

GC Semi VOA

Prep Batch: 57500

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4917-1	BES23-01 0.5'	Total/NA	Solid	8015NM Prep	
890-4917-2	BES23-02 0.5'	Total/NA	Solid	8015NM Prep	
890-4917-3	BES23-03 0.5'	Total/NA	Solid	8015NM Prep	
890-4917-4	BES23-04 0.5'	Total/NA	Solid	8015NM Prep	
890-4917-5	BES23-05 0.5'	Total/NA	Solid	8015NM Prep	
890-4917-6	BES23-06 0.5'	Total/NA	Solid	8015NM Prep	
890-4917-7	BES23-07 0.5'	Total/NA	Solid	8015NM Prep	
890-4917-8	BES23-08 0.5'	Total/NA	Solid	8015NM Prep	
890-4917-9	BES23-09 0.5'	Total/NA	Solid	8015NM Prep	
890-4917-10	BES23-10 0.5'	Total/NA	Solid	8015NM Prep	
890-4917-11	BES23-11 0.5'	Total/NA	Solid	8015NM Prep	
890-4917-12	BES23-12 0.5'	Total/NA	Solid	8015NM Prep	
890-4917-13	BES23-13 0.5'	Total/NA	Solid	8015NM Prep	
890-4917-14	BES23-14 0.5'	Total/NA	Solid	8015NM Prep	
890-4917-15	BES23-15 0.5'	Total/NA	Solid	8015NM Prep	
890-4917-16	BES23-16 0.5'	Total/NA	Solid	8015NM Prep	
890-4917-17	BES23-17 0.5'	Total/NA	Solid	8015NM Prep	
890-4917-18	BES23-18 0.5'	Total/NA	Solid	8015NM Prep	
890-4917-19	BES23-19 0.5'	Total/NA	Solid	8015NM Prep	
890-4917-20	BES23-20 0.5'	Total/NA	Solid	8015NM Prep	

QC Association Summary

Client: Vertex
Project/Site: Corral Fly

Job ID: 890-4917-1
SDG: 23E-02502

GC Semi VOA (Continued)

Prep Batch: 57500 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-57500/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-57500/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-57500/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-4917-1 MS	BES23-01 0.5'	Total/NA	Solid	8015NM Prep	
890-4917-1 MSD	BES23-01 0.5'	Total/NA	Solid	8015NM Prep	

Analysis Batch: 57755

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4917-1	BES23-01 0.5'	Total/NA	Solid	8015B NM	57500
890-4917-2	BES23-02 0.5'	Total/NA	Solid	8015B NM	57500
890-4917-3	BES23-03 0.5'	Total/NA	Solid	8015B NM	57500
890-4917-4	BES23-04 0.5'	Total/NA	Solid	8015B NM	57500
890-4917-5	BES23-05 0.5'	Total/NA	Solid	8015B NM	57500
890-4917-6	BES23-06 0.5'	Total/NA	Solid	8015B NM	57500
890-4917-7	BES23-07 0.5'	Total/NA	Solid	8015B NM	57500
890-4917-8	BES23-08 0.5'	Total/NA	Solid	8015B NM	57500
890-4917-9	BES23-09 0.5'	Total/NA	Solid	8015B NM	57500
890-4917-10	BES23-10 0.5'	Total/NA	Solid	8015B NM	57500
890-4917-11	BES23-11 0.5'	Total/NA	Solid	8015B NM	57500
890-4917-12	BES23-12 0.5'	Total/NA	Solid	8015B NM	57500
890-4917-13	BES23-13 0.5'	Total/NA	Solid	8015B NM	57500
890-4917-14	BES23-14 0.5'	Total/NA	Solid	8015B NM	57500
890-4917-15	BES23-15 0.5'	Total/NA	Solid	8015B NM	57500
890-4917-16	BES23-16 0.5'	Total/NA	Solid	8015B NM	57500
890-4917-17	BES23-17 0.5'	Total/NA	Solid	8015B NM	57500
890-4917-18	BES23-18 0.5'	Total/NA	Solid	8015B NM	57500
890-4917-19	BES23-19 0.5'	Total/NA	Solid	8015B NM	57500
890-4917-20	BES23-20 0.5'	Total/NA	Solid	8015B NM	57500
MB 880-57500/1-A	Method Blank	Total/NA	Solid	8015B NM	57500
LCS 880-57500/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	57500
LCSD 880-57500/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	57500
890-4917-1 MS	BES23-01 0.5'	Total/NA	Solid	8015B NM	57500
890-4917-1 MSD	BES23-01 0.5'	Total/NA	Solid	8015B NM	57500

Analysis Batch: 57825

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4917-1	BES23-01 0.5'	Total/NA	Solid	8015 NM	
890-4917-2	BES23-02 0.5'	Total/NA	Solid	8015 NM	
890-4917-3	BES23-03 0.5'	Total/NA	Solid	8015 NM	
890-4917-4	BES23-04 0.5'	Total/NA	Solid	8015 NM	
890-4917-5	BES23-05 0.5'	Total/NA	Solid	8015 NM	
890-4917-6	BES23-06 0.5'	Total/NA	Solid	8015 NM	
890-4917-7	BES23-07 0.5'	Total/NA	Solid	8015 NM	
890-4917-8	BES23-08 0.5'	Total/NA	Solid	8015 NM	
890-4917-9	BES23-09 0.5'	Total/NA	Solid	8015 NM	
890-4917-10	BES23-10 0.5'	Total/NA	Solid	8015 NM	
890-4917-11	BES23-11 0.5'	Total/NA	Solid	8015 NM	
890-4917-12	BES23-12 0.5'	Total/NA	Solid	8015 NM	
890-4917-13	BES23-13 0.5'	Total/NA	Solid	8015 NM	
890-4917-14	BES23-14 0.5'	Total/NA	Solid	8015 NM	
890-4917-15	BES23-15 0.5'	Total/NA	Solid	8015 NM	

QC Association Summary

Client: Vertex
Project/Site: Corral Fly

Job ID: 890-4917-1
SDG: 23E-02502

GC Semi VOA (Continued)

Analysis Batch: 57825 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4917-16	BES23-16 0.5'	Total/NA	Solid	8015 NM	
890-4917-17	BES23-17 0.5'	Total/NA	Solid	8015 NM	
890-4917-18	BES23-18 0.5'	Total/NA	Solid	8015 NM	
890-4917-19	BES23-19 0.5'	Total/NA	Solid	8015 NM	
890-4917-20	BES23-20 0.5'	Total/NA	Solid	8015 NM	

HPLC/IC

Leach Batch: 57318

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4917-1	BES23-01 0.5'	Soluble	Solid	DI Leach	
890-4917-2	BES23-02 0.5'	Soluble	Solid	DI Leach	
890-4917-3	BES23-03 0.5'	Soluble	Solid	DI Leach	
890-4917-4	BES23-04 0.5'	Soluble	Solid	DI Leach	
890-4917-5	BES23-05 0.5'	Soluble	Solid	DI Leach	
890-4917-6	BES23-06 0.5'	Soluble	Solid	DI Leach	
890-4917-7	BES23-07 0.5'	Soluble	Solid	DI Leach	
890-4917-8	BES23-08 0.5'	Soluble	Solid	DI Leach	
890-4917-9	BES23-09 0.5'	Soluble	Solid	DI Leach	
890-4917-10	BES23-10 0.5'	Soluble	Solid	DI Leach	
890-4917-11	BES23-11 0.5'	Soluble	Solid	DI Leach	
890-4917-12	BES23-12 0.5'	Soluble	Solid	DI Leach	
890-4917-13	BES23-13 0.5'	Soluble	Solid	DI Leach	
890-4917-14	BES23-14 0.5'	Soluble	Solid	DI Leach	
890-4917-15	BES23-15 0.5'	Soluble	Solid	DI Leach	
890-4917-16	BES23-16 0.5'	Soluble	Solid	DI Leach	
890-4917-17	BES23-17 0.5'	Soluble	Solid	DI Leach	
890-4917-18	BES23-18 0.5'	Soluble	Solid	DI Leach	
890-4917-19	BES23-19 0.5'	Soluble	Solid	DI Leach	
890-4917-20	BES23-20 0.5'	Soluble	Solid	DI Leach	
MB 880-57318/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-57318/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-57318/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-4917-1 MS	BES23-01 0.5'	Soluble	Solid	DI Leach	
890-4917-1 MSD	BES23-01 0.5'	Soluble	Solid	DI Leach	
890-4917-11 MS	BES23-11 0.5'	Soluble	Solid	DI Leach	
890-4917-11 MSD	BES23-11 0.5'	Soluble	Solid	DI Leach	

Analysis Batch: 57419

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4917-1	BES23-01 0.5'	Soluble	Solid	300.0	57318
890-4917-2	BES23-02 0.5'	Soluble	Solid	300.0	57318
890-4917-3	BES23-03 0.5'	Soluble	Solid	300.0	57318
890-4917-4	BES23-04 0.5'	Soluble	Solid	300.0	57318
890-4917-5	BES23-05 0.5'	Soluble	Solid	300.0	57318
890-4917-6	BES23-06 0.5'	Soluble	Solid	300.0	57318
890-4917-7	BES23-07 0.5'	Soluble	Solid	300.0	57318
890-4917-8	BES23-08 0.5'	Soluble	Solid	300.0	57318
890-4917-9	BES23-09 0.5'	Soluble	Solid	300.0	57318
890-4917-10	BES23-10 0.5'	Soluble	Solid	300.0	57318
890-4917-11	BES23-11 0.5'	Soluble	Solid	300.0	57318

QC Association Summary

Client: Vertex
Project/Site: Corral Fly

Job ID: 890-4917-1
SDG: 23E-02502

HPLC/IC (Continued)

Analysis Batch: 57419 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4917-12	BES23-12 0.5'	Soluble	Solid	300.0	57318
890-4917-13	BES23-13 0.5'	Soluble	Solid	300.0	57318
890-4917-14	BES23-14 0.5'	Soluble	Solid	300.0	57318
890-4917-15	BES23-15 0.5'	Soluble	Solid	300.0	57318
890-4917-16	BES23-16 0.5'	Soluble	Solid	300.0	57318
890-4917-17	BES23-17 0.5'	Soluble	Solid	300.0	57318
890-4917-18	BES23-18 0.5'	Soluble	Solid	300.0	57318
890-4917-19	BES23-19 0.5'	Soluble	Solid	300.0	57318
890-4917-20	BES23-20 0.5'	Soluble	Solid	300.0	57318
MB 880-57318/1-A	Method Blank	Soluble	Solid	300.0	57318
LCS 880-57318/2-A	Lab Control Sample	Soluble	Solid	300.0	57318
LCSD 880-57318/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	57318
890-4917-1 MS	BES23-01 0.5'	Soluble	Solid	300.0	57318
890-4917-1 MSD	BES23-01 0.5'	Soluble	Solid	300.0	57318
890-4917-11 MS	BES23-11 0.5'	Soluble	Solid	300.0	57318
890-4917-11 MSD	BES23-11 0.5'	Soluble	Solid	300.0	57318

Lab Chronicle

Client: Vertex
Project/Site: Corral Fly

Job ID: 890-4917-1
SDG: 23E-02502

Client Sample ID: BES23-01 0.5'

Lab Sample ID: 890-4917-1
Matrix: Solid
Date Collected: 07/07/23 09:00
Date Received: 07/07/23 16:20

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.95 g	5 mL	57409	07/11/23 12:27	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	57424	07/12/23 00:00	SM	EET MID
Total/NA	Analysis	Total BTEX		1			57527	07/12/23 14:53	SM	EET MID
Total/NA	Analysis	8015 NM		1			57825	07/17/23 10:54	SM	EET MID
Total/NA	Prep	8015NM Prep			10.06 g	10 mL	57500	07/12/23 11:56	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	57755	07/16/23 21:47	SM	EET MID
Soluble	Leach	DI Leach			4.99 g	50 mL	57318	07/10/23 13:55	KS	EET MID
Soluble	Analysis	300.0		10			57419	07/11/23 20:38	CH	EET MID

Client Sample ID: BES23-02 0.5'

Lab Sample ID: 890-4917-2
Matrix: Solid
Date Collected: 07/07/23 09:05
Date Received: 07/07/23 16:20

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	57409	07/11/23 12:27	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	57424	07/12/23 00:25	SM	EET MID
Total/NA	Analysis	Total BTEX		1			57527	07/12/23 14:53	SM	EET MID
Total/NA	Analysis	8015 NM		1			57825	07/17/23 10:54	SM	EET MID
Total/NA	Prep	8015NM Prep			9.91 g	10 mL	57500	07/12/23 11:56	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	57755	07/16/23 22:47	SM	EET MID
Soluble	Leach	DI Leach			5.02 g	50 mL	57318	07/10/23 13:55	KS	EET MID
Soluble	Analysis	300.0		5			57419	07/11/23 20:53	CH	EET MID

Client Sample ID: BES23-03 0.5'

Lab Sample ID: 890-4917-3
Matrix: Solid
Date Collected: 07/07/23 09:10
Date Received: 07/07/23 16:20

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	57409	07/11/23 12:27	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	57424	07/12/23 00:50	SM	EET MID
Total/NA	Analysis	Total BTEX		1			57527	07/12/23 14:53	SM	EET MID
Total/NA	Analysis	8015 NM		1			57825	07/17/23 10:54	SM	EET MID
Total/NA	Prep	8015NM Prep			10.07 g	10 mL	57500	07/12/23 11:56	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	57755	07/16/23 23:08	SM	EET MID
Soluble	Leach	DI Leach			5.03 g	50 mL	57318	07/10/23 13:55	KS	EET MID
Soluble	Analysis	300.0		5			57419	07/11/23 20:58	CH	EET MID

Client Sample ID: BES23-04 0.5'

Lab Sample ID: 890-4917-4
Matrix: Solid
Date Collected: 07/07/23 09:15
Date Received: 07/07/23 16:20

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	57409	07/11/23 12:27	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	57424	07/12/23 01:15	SM	EET MID
Total/NA	Analysis	Total BTEX		1			57527	07/12/23 14:53	SM	EET MID

Lab Chronicle

Client: Vertex
Project/Site: Corral Fly

Job ID: 890-4917-1
SDG: 23E-02502

Client Sample ID: BES23-04 0.5'

Lab Sample ID: 890-4917-4
Matrix: Solid
Date Collected: 07/07/23 09:15
Date Received: 07/07/23 16:20

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			57825	07/17/23 10:54	SM	EET MID
Total/NA	Prep	8015NM Prep			10.04 g	10 mL	57500	07/12/23 11:56	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	57755	07/16/23 23:28	SM	EET MID
Soluble	Leach	DI Leach			4.98 g	50 mL	57318	07/10/23 13:55	KS	EET MID
Soluble	Analysis	300.0		10			57419	07/11/23 21:04	CH	EET MID

Client Sample ID: BES23-05 0.5'

Lab Sample ID: 890-4917-5
Matrix: Solid
Date Collected: 07/07/23 09:20
Date Received: 07/07/23 16:20

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	57409	07/11/23 12:27	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	57424	07/12/23 01:40	SM	EET MID
Total/NA	Analysis	Total BTEX		1			57527	07/12/23 14:53	SM	EET MID
Total/NA	Analysis	8015 NM		1			57825	07/17/23 10:54	SM	EET MID
Total/NA	Prep	8015NM Prep			10.00 g	10 mL	57500	07/12/23 11:56	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	57755	07/16/23 23:48	SM	EET MID
Soluble	Leach	DI Leach			5.05 g	50 mL	57318	07/10/23 13:55	KS	EET MID
Soluble	Analysis	300.0		5			57419	07/11/23 21:09	CH	EET MID

Client Sample ID: BES23-06 0.5'

Lab Sample ID: 890-4917-6
Matrix: Solid
Date Collected: 07/07/23 09:25
Date Received: 07/07/23 16:20

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	57409	07/11/23 12:27	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	57424	07/12/23 02:05	SM	EET MID
Total/NA	Analysis	Total BTEX		1			57527	07/12/23 14:53	SM	EET MID
Total/NA	Analysis	8015 NM		1			57825	07/17/23 10:54	SM	EET MID
Total/NA	Prep	8015NM Prep			9.94 g	10 mL	57500	07/12/23 11:56	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	57755	07/17/23 00:08	SM	EET MID
Soluble	Leach	DI Leach			4.96 g	50 mL	57318	07/10/23 13:55	KS	EET MID
Soluble	Analysis	300.0		10			57419	07/11/23 21:24	CH	EET MID

Client Sample ID: BES23-07 0.5'

Lab Sample ID: 890-4917-7
Matrix: Solid
Date Collected: 07/07/23 09:30
Date Received: 07/07/23 16:20

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	57409	07/11/23 12:27	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	57424	07/12/23 02:30	SM	EET MID
Total/NA	Analysis	Total BTEX		1			57527	07/12/23 14:53	SM	EET MID
Total/NA	Analysis	8015 NM		1			57825	07/17/23 10:54	SM	EET MID
Total/NA	Prep	8015NM Prep			9.93 g	10 mL	57500	07/12/23 11:56	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	57755	07/17/23 00:28	SM	EET MID

Lab Chronicle

Client: Vertex
Project/Site: Corral Fly

Job ID: 890-4917-1
SDG: 23E-02502

Client Sample ID: BES23-07 0.5'
Lab Sample ID: 890-4917-7
Date Collected: 07/07/23 09:30
Matrix: Solid
Date Received: 07/07/23 16:20

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	57318	07/10/23 13:55	KS	EET MID
Soluble	Analysis	300.0		5			57419	07/11/23 21:29	CH	EET MID

Client Sample ID: BES23-08 0.5'
Lab Sample ID: 890-4917-8
Date Collected: 07/07/23 09:35
Matrix: Solid
Date Received: 07/07/23 16:20

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	57409	07/11/23 12:27	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	57424	07/12/23 02:56	SM	EET MID
Total/NA	Analysis	Total BTEX		1			57527	07/12/23 14:53	SM	EET MID
Total/NA	Analysis	8015 NM		1			57825	07/17/23 10:54	SM	EET MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	57500	07/12/23 11:56	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	57755	07/17/23 00:48	SM	EET MID
Soluble	Leach	DI Leach			5.02 g	50 mL	57318	07/10/23 13:55	KS	EET MID
Soluble	Analysis	300.0		10			57419	07/11/23 21:34	CH	EET MID

Client Sample ID: BES23-09 0.5'
Lab Sample ID: 890-4917-9
Date Collected: 07/07/23 09:40
Matrix: Solid
Date Received: 07/07/23 16:20

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	57409	07/11/23 12:27	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	57424	07/12/23 03:21	SM	EET MID
Total/NA	Analysis	Total BTEX		1			57527	07/12/23 14:53	SM	EET MID
Total/NA	Analysis	8015 NM		1			57825	07/17/23 10:54	SM	EET MID
Total/NA	Prep	8015NM Prep			9.97 g	10 mL	57500	07/12/23 11:56	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	57755	07/17/23 01:08	SM	EET MID
Soluble	Leach	DI Leach			5.04 g	50 mL	57318	07/10/23 13:55	KS	EET MID
Soluble	Analysis	300.0		20			57419	07/11/23 21:40	CH	EET MID

Client Sample ID: BES23-10 0.5'
Lab Sample ID: 890-4917-10
Date Collected: 07/07/23 09:45
Matrix: Solid
Date Received: 07/07/23 16:20

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.95 g	5 mL	57409	07/11/23 12:27	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	57424	07/12/23 03:46	SM	EET MID
Total/NA	Analysis	Total BTEX		1			57527	07/12/23 14:53	SM	EET MID
Total/NA	Analysis	8015 NM		1			57825	07/17/23 10:54	SM	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	57500	07/12/23 11:56	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	57755	07/17/23 01:28	SM	EET MID
Soluble	Leach	DI Leach			4.98 g	50 mL	57318	07/10/23 13:55	KS	EET MID
Soluble	Analysis	300.0		10			57419	07/11/23 21:45	CH	EET MID

Lab Chronicle

Client: Vertex
Project/Site: Corral Fly

Job ID: 890-4917-1
SDG: 23E-02502

Client Sample ID: BES23-11 0.5'

Lab Sample ID: 890-4917-11
Matrix: Solid
Date Collected: 07/07/23 09:50
Date Received: 07/07/23 16:20

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	57409	07/11/23 12:27	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	57424	07/12/23 05:28	SM	EET MID
Total/NA	Analysis	Total BTEX		1			57527	07/12/23 14:53	SM	EET MID
Total/NA	Analysis	8015 NM		1			57825	07/17/23 10:54	SM	EET MID
Total/NA	Prep	8015NM Prep			9.96 g	10 mL	57500	07/12/23 11:56	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	57755	07/17/23 02:08	SM	EET MID
Soluble	Leach	DI Leach			5.03 g	50 mL	57318	07/10/23 13:55	KS	EET MID
Soluble	Analysis	300.0		20			57419	07/11/23 21:50	CH	EET MID

Client Sample ID: BES23-12 0.5'

Lab Sample ID: 890-4917-12
Matrix: Solid
Date Collected: 07/07/23 09:55
Date Received: 07/07/23 16:20

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	57409	07/11/23 12:27	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	57424	07/12/23 05:54	SM	EET MID
Total/NA	Analysis	Total BTEX		1			57527	07/12/23 14:53	SM	EET MID
Total/NA	Analysis	8015 NM		1			57825	07/17/23 10:54	SM	EET MID
Total/NA	Prep	8015NM Prep			9.90 g	10 mL	57500	07/12/23 11:56	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	57755	07/17/23 02:28	SM	EET MID
Soluble	Leach	DI Leach			5 g	50 mL	57318	07/10/23 13:55	KS	EET MID
Soluble	Analysis	300.0		10			57419	07/11/23 22:05	CH	EET MID

Client Sample ID: BES23-13 0.5'

Lab Sample ID: 890-4917-13
Matrix: Solid
Date Collected: 07/07/23 10:00
Date Received: 07/07/23 16:20

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.00 g	5 mL	57409	07/11/23 12:27	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	57424	07/12/23 06:20	SM	EET MID
Total/NA	Analysis	Total BTEX		1			57527	07/12/23 14:53	SM	EET MID
Total/NA	Analysis	8015 NM		1			57825	07/17/23 10:54	SM	EET MID
Total/NA	Prep	8015NM Prep			9.91 g	10 mL	57500	07/12/23 11:56	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	57755	07/17/23 02:48	SM	EET MID
Soluble	Leach	DI Leach			5.01 g	50 mL	57318	07/10/23 13:55	KS	EET MID
Soluble	Analysis	300.0		20			57419	07/11/23 22:10	CH	EET MID

Client Sample ID: BES23-14 0.5'

Lab Sample ID: 890-4917-14
Matrix: Solid
Date Collected: 07/07/23 10:05
Date Received: 07/07/23 16:20

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	57409	07/11/23 12:27	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	57424	07/12/23 06:45	SM	EET MID
Total/NA	Analysis	Total BTEX		1			57527	07/12/23 14:53	SM	EET MID

Eurofins Carlsbad

Lab Chronicle

Client: Vertex
Project/Site: Corral Fly

Job ID: 890-4917-1
SDG: 23E-02502

Client Sample ID: BES23-14 0.5'

Lab Sample ID: 890-4917-14
Matrix: Solid
Date Collected: 07/07/23 10:05
Date Received: 07/07/23 16:20

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			57825	07/17/23 10:54	SM	EET MID
Total/NA	Prep	8015NM Prep			9.99 g	10 mL	57500	07/12/23 11:56	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	57755	07/17/23 03:08	SM	EET MID
Soluble	Leach	DI Leach			4.99 g	50 mL	57318	07/10/23 13:55	KS	EET MID
Soluble	Analysis	300.0		5			57419	07/11/23 22:26	CH	EET MID

Client Sample ID: BES23-15 0.5'

Lab Sample ID: 890-4917-15
Matrix: Solid
Date Collected: 07/07/23 10:10
Date Received: 07/07/23 16:20

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	57409	07/11/23 12:27	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	57424	07/12/23 07:12	SM	EET MID
Total/NA	Analysis	Total BTEX		1			57527	07/12/23 14:53	SM	EET MID
Total/NA	Analysis	8015 NM		1			57825	07/17/23 10:54	SM	EET MID
Total/NA	Prep	8015NM Prep			9.98 g	10 mL	57500	07/12/23 11:56	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	57755	07/17/23 03:28	SM	EET MID
Soluble	Leach	DI Leach			4.97 g	50 mL	57318	07/10/23 13:55	KS	EET MID
Soluble	Analysis	300.0		20			57419	07/11/23 22:31	CH	EET MID

Client Sample ID: BES23-16 0.5'

Lab Sample ID: 890-4917-16
Matrix: Solid
Date Collected: 07/07/23 10:15
Date Received: 07/07/23 16:20

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	57409	07/11/23 12:27	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	57424	07/12/23 07:38	SM	EET MID
Total/NA	Analysis	Total BTEX		1			57527	07/12/23 14:53	SM	EET MID
Total/NA	Analysis	8015 NM		1			57825	07/17/23 10:54	SM	EET MID
Total/NA	Prep	8015NM Prep			10.10 g	10 mL	57500	07/12/23 11:56	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	57755	07/17/23 03:48	SM	EET MID
Soluble	Leach	DI Leach			5 g	50 mL	57318	07/10/23 13:55	KS	EET MID
Soluble	Analysis	300.0		5			57419	07/11/23 22:36	CH	EET MID

Client Sample ID: BES23-17 0.5'

Lab Sample ID: 890-4917-17
Matrix: Solid
Date Collected: 07/07/23 10:20
Date Received: 07/07/23 16:20

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.04 g	5 mL	57409	07/11/23 12:27	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	57424	07/12/23 08:03	SM	EET MID
Total/NA	Analysis	Total BTEX		1			57527	07/12/23 14:53	SM	EET MID
Total/NA	Analysis	8015 NM		1			57825	07/17/23 10:54	SM	EET MID
Total/NA	Prep	8015NM Prep			10.09 g	10 mL	57500	07/12/23 11:56	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	57755	07/17/23 04:09	SM	EET MID

Eurofins Carlsbad

Lab Chronicle

Client: Vertex
Project/Site: Corral Fly

Job ID: 890-4917-1
SDG: 23E-02502

Client Sample ID: BES23-17 0.5'

Lab Sample ID: 890-4917-17

Date Collected: 07/07/23 10:20
Matrix: Solid
Date Received: 07/07/23 16:20

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Soluble	Leach	DI Leach			4.99 g	50 mL	57318	07/10/23 13:55	KS	EET MID
Soluble	Analysis	300.0		10			57419	07/11/23 22:42	CH	EET MID

Client Sample ID: BES23-18 0.5'

Lab Sample ID: 890-4917-18

Date Collected: 07/07/23 10:25
Matrix: Solid
Date Received: 07/07/23 16:20

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	57409	07/11/23 12:27	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	57424	07/12/23 08:47	SM	EET MID
Total/NA	Analysis	Total BTEX		1			57527	07/12/23 14:53	SM	EET MID
Total/NA	Analysis	8015 NM		1			57825	07/17/23 10:54	SM	EET MID
Total/NA	Prep	8015NM Prep			10.05 g	10 mL	57500	07/12/23 11:56	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	57755	07/17/23 04:29	SM	EET MID
Soluble	Leach	DI Leach			5.01 g	50 mL	57318	07/10/23 13:55	KS	EET MID
Soluble	Analysis	300.0		10			57419	07/11/23 22:47	CH	EET MID

Client Sample ID: BES23-19 0.5'

Lab Sample ID: 890-4917-19

Date Collected: 07/07/23 10:30
Matrix: Solid
Date Received: 07/07/23 16:20

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	57409	07/11/23 12:27	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	57424	07/12/23 09:12	SM	EET MID
Total/NA	Analysis	Total BTEX		1			57527	07/12/23 14:53	SM	EET MID
Total/NA	Analysis	8015 NM		1			57825	07/17/23 10:54	SM	EET MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	57500	07/12/23 11:56	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	57755	07/17/23 04:49	SM	EET MID
Soluble	Leach	DI Leach			5.01 g	50 mL	57318	07/10/23 13:55	KS	EET MID
Soluble	Analysis	300.0		20			57419	07/11/23 22:52	CH	EET MID

Client Sample ID: BES23-20 0.5'

Lab Sample ID: 890-4917-20

Date Collected: 07/07/23 10:35
Matrix: Solid
Date Received: 07/07/23 16:20

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	57409	07/11/23 12:27	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	57424	07/12/23 09:38	SM	EET MID
Total/NA	Analysis	Total BTEX		1			57527	07/12/23 14:53	SM	EET MID
Total/NA	Analysis	8015 NM		1			57825	07/17/23 10:54	SM	EET MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	57500	07/12/23 11:56	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	57755	07/17/23 05:09	SM	EET MID
Soluble	Leach	DI Leach			5.02 g	50 mL	57318	07/10/23 13:55	KS	EET MID
Soluble	Analysis	300.0		10			57419	07/11/23 22:57	CH	EET MID

Lab Chronicle

Client: Vertex
Project/Site: Corral Fly

Job ID: 890-4917-1
SDG: 23E-02502

Laboratory References:

EET MID = Eurofins Midland, 1211 W. Florida Ave, Midland, TX 79701, TEL (432)704-5440

Accreditation/Certification Summary

Client: Vertex
Project/Site: Corral Fly

Job ID: 890-4917-1
SDG: 23E-02502

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	T104704400-23-26	06-30-24

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: Vertex
Project/Site: Corral Fly

Job ID: 890-4917-1
SDG: 23E-02502

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	EPA	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

EPA = US Environmental Protection Agency

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: Vertex
Project/Site: Corral Fly

Job ID: 890-4917-1
SDG: 23E-02502

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-4917-1	BES23-01 0.5'	Solid	07/07/23 09:00	07/07/23 16:20	0.5
890-4917-2	BES23-02 0.5'	Solid	07/07/23 09:05	07/07/23 16:20	0.5
890-4917-3	BES23-03 0.5'	Solid	07/07/23 09:10	07/07/23 16:20	0.5
890-4917-4	BES23-04 0.5'	Solid	07/07/23 09:15	07/07/23 16:20	0.5
890-4917-5	BES23-05 0.5'	Solid	07/07/23 09:20	07/07/23 16:20	0.5
890-4917-6	BES23-06 0.5'	Solid	07/07/23 09:25	07/07/23 16:20	0.5
890-4917-7	BES23-07 0.5'	Solid	07/07/23 09:30	07/07/23 16:20	0.5
890-4917-8	BES23-08 0.5'	Solid	07/07/23 09:35	07/07/23 16:20	0.5
890-4917-9	BES23-09 0.5'	Solid	07/07/23 09:40	07/07/23 16:20	0.5
890-4917-10	BES23-10 0.5'	Solid	07/07/23 09:45	07/07/23 16:20	0.5
890-4917-11	BES23-11 0.5'	Solid	07/07/23 09:50	07/07/23 16:20	0.5
890-4917-12	BES23-12 0.5'	Solid	07/07/23 09:55	07/07/23 16:20	0.5
890-4917-13	BES23-13 0.5'	Solid	07/07/23 10:00	07/07/23 16:20	0.5
890-4917-14	BES23-14 0.5'	Solid	07/07/23 10:05	07/07/23 16:20	0.5
890-4917-15	BES23-15 0.5'	Solid	07/07/23 10:10	07/07/23 16:20	0.5
890-4917-16	BES23-16 0.5'	Solid	07/07/23 10:15	07/07/23 16:20	0.5
890-4917-17	BES23-17 0.5'	Solid	07/07/23 10:20	07/07/23 16:20	0.5
890-4917-18	BES23-18 0.5'	Solid	07/07/23 10:25	07/07/23 16:20	0.5
890-4917-19	BES23-19 0.5'	Solid	07/07/23 10:30	07/07/23 16:20	0.5
890-4917-20	BES23-20 0.5'	Solid	07/07/23 10:35	07/07/23 16:20	0.5

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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: _____

www.xenco.com Page 1 of 2

Project Manager:	Chance Dixon	Bill to: (if different)	Rob Kirk
Company Name:	Vertex	Company Name:	Solaris Midstream
Address:		Address:	
City, State ZIP:		City, State ZIP:	cdixon@vertex.ca
Phone:	Email:		cdixon@vertex.ca

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:	Corral Fly	Turn Around	
Project Number:	23E-02502	☒ Routine ☐ Rush	
Project Location:		Due Date:	
Sampler's Name:	Hunter Klein	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:	TM007
Cooler Custody Seals:	Yes No (N/A)	Correction Factor:	-0.2
Sample Custody Seals:	Yes No (N/A)	Temperature Reading:	23.8
Total Containers:		Corrected Temperature:	23.6

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

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Grab/Comp	# of Cont	Pres. Code	Parameters: TPH	BTEX	Cl	Sample Comments
BES23-01 0.5'	Soil	7/7/23	9:00			5		X	X	X	
BES23-02 0.5'			9:05					X	X	X	
BES23-03 0.5'			9:10					X	X	X	
BES23-04 0.5'			9:15					X	X	X	
BES23-05 0.5'			9:20					X	X	X	
BES23-06 0.5'			9:25					X	X	X	
BES23-07 0.5'			9:30					X	X	X	
BES23-08 0.5'			9:35					X	X	X	
BES23-09 0.5'			9:40					X	X	X	
BES23-10 0.5'		7/7/23	9:45			5		X	X	X	

890-4917 Chain of Custody

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 Hunter Klein	Cue Cp	7.7.23 1620			
3			4		
5			6		

Revised Date: 08/25/2020 Rev. 2020.2

Received by OCD: 7/24/2024 3:24:20 PM
Released to Imaging: 7/26/2024 3:59:45 PM
7/17/2023

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7/17/2023

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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: _____

www.xenco.com Page 2 of 2

Project Manager:	Chance Dixon	Bill to: (if different)	Rob Kirk
Company Name:	Vertex	Company Name:	Solaris Midstream
Address:		Address:	
City, State ZIP:		City, State ZIP:	
Phone:	Email:		cdixon@vertex.ca

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:	Corral Fly	Turn Around	
Project Number:	23E-02502	☒ Routine ☐ Rush	
Project Location:		Due Date:	
Sampler's Name:	Hunter Klein	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:	
Cooler Custody Seals:	Yes No N/A	Correction Factor:	
Sample Custody Seals:	Yes No N/A	Temperature Reading:	
Total Containers:		Corrected Temperature:	

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

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Grab/ Comp	# of Cont	Pres. Code	TPH	BTEX	Cl	Sample Comments
BES23-11 0.5'	Soil	7/7/23	9:50			5		X	X	X	
BES23-12 0.5'			9:55					X	X	X	
BES23-13 0.5'			10:00					X	X	X	
BES23-14 0.5'			10:05					X	X	X	
BES23-15 0.5'			10:10					X	X	X	
BES23-16 0.5'			10:15					X	X	X	
BES23-17 0.5'			10:20					X	X	X	
BES23-18 0.5'			10:25					X	X	X	
BES23-19 0.5'			10:30					X	X	X	
BES23-20 0.5'			10:35					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

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 Hunter Klein	Chase Cup	7.7.23 1620	2		
3			4		
5			6		

Revised Date: 08/25/2020 Rev. 2020.2

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Received by OCD: 7/24/2024 3:24:20 PM

Released to Imaging: 7/26/2024 3:59:45 PM

Login Sample Receipt Checklist

Client: Vertex

Job Number: 890-4917-1
SDG Number: 23E-02502

Login Number: 4917
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: Vertex

Job Number: 890-4917-1
SDG Number: 23E-02502

Login Number: 4917
List Number: 2
Creator: Rodriguez, Leticia

List Source: Eurofins Midland
List Creation: 07/11/23 11:07 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	

eurofins | Environment Testing

ANALYTICAL REPORT

PREPARED FOR

Attn: Chance Dixon
Vertex
3101 Boyd Dr
Carlsbad, New Mexico 88220

Generated 7/26/2023 4:33:43 PM

JOB DESCRIPTION

Corral Fly
SDG NUMBER 23E-02502

JOB NUMBER

890-4931-1

Eurofins Carlsbad
1089 N Canal St.
Carlsbad NM 88220

See page two for job notes and contact information.

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my EOL

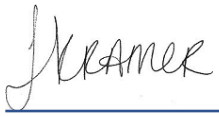
Eurofins Carlsbad

Job Notes

This report may not be reproduced except in full, and with written approval from the laboratory. The results relate only to the samples tested. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

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



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Authorized for release by
Jessica Kramer, Project Manager
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Client: Vertex
Project/Site: Corral Fly

Laboratory Job ID: 890-4931-1
SDG: 23E-02502

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Eurofins Carlsbad
7/26/2023

Definitions/Glossary

Client: Vertex
Project/Site: Corral Fly

Job ID: 890-4931-1
SDG: 23E-02502

Qualifiers

GC VOA

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.

GC Semi VOA

Qualifier	Qualifier Description
S1-	Surrogate recovery exceeds control limits, low biased.
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: Vertex
Project/Site: Corral Fly

Job ID: 890-4931-1
SDG: 23E-02502

Job ID: 890-4931-1

Laboratory: Eurofins Carlsbad

Narrative

Job Narrative
890-4931-1

Receipt
The samples were received on 7/12/2023 9:54 AM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 5.0°C

Receipt Exceptions
The following were received and analyzed from an unpreserved bulk soil jar: BES 23-21 0.5' (890-4931-1), BES 23-22 0.5' (890-4931-2), BES 23-23 0.5' (890-4931-3), BES 23-24 0.5' (890-4931-4), BES 23-25 0.5' (890-4931-5), BES 23-26 0.5' (890-4931-6), BES 23-27 0.5' (890-4931-7), BES 23-28 0.5' (890-4931-8) and BES 23-29 0.5' (890-4931-9).

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: (890-4931-A-1-F MS) and (890-4931-A-1-G MSD). 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.

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: Vertex
Project/Site: Corral Fly

Job ID: 890-4931-1
SDG: 23E-02502

Client Sample ID: BES 23-21 0.5'
Date Collected: 07/11/23 10:00
Date Received: 07/12/23 09:54

Lab Sample ID: 890-4931-1
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		07/14/23 14:36	07/15/23 18:08	1
Ethylbenzene	<0.00202	U	0.00202		mg/Kg		07/14/23 14:36	07/15/23 18:08	1
Toluene	<0.00202	U	0.00202		mg/Kg		07/14/23 14:36	07/15/23 18:08	1
Xylenes, Total	<0.00403	U	0.00403		mg/Kg		07/14/23 14:36	07/15/23 18:08	1
m-Xylene & p-Xylene	<0.00403	U	0.00403		mg/Kg		07/14/23 14:36	07/15/23 18:08	1
o-Xylene	<0.00202	U	0.00202		mg/Kg		07/14/23 14:36	07/15/23 18:08	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*80*		*70 - 130*	*07/14/23 14:36*	*07/15/23 18:08*	*1*
1,4-Difluorobenzene (Surr)	*93*		*70 - 130*	*07/14/23 14:36*	*07/15/23 18:08*	*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			07/17/23 13:55	1

Method: SW846 8015 NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**92.2**		50.2		mg/Kg			07/26/23 13:31	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	<50.2	U	50.2		mg/Kg		07/19/23 10:30	07/25/23 17:14	1
Diesel Range Organics (Over C10-C28)	**92.2**		50.2		mg/Kg		07/19/23 10:30	07/25/23 17:14	1
Oil Range Organics (Over C28-C36)	<50.2	U	50.2		mg/Kg		07/19/23 10:30	07/25/23 17:14	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*75*		*70 - 130*	*07/19/23 10:30*	*07/25/23 17:14*	*1*
o-Terphenyl	*89*		*70 - 130*	*07/19/23 10:30*	*07/25/23 17:14*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**456**		5.00		mg/Kg			07/14/23 17:13	1

Client Sample ID: BES 23-22 0.5'
Date Collected: 07/11/23 10:05
Date Received: 07/12/23 09:54

Lab Sample ID: 890-4931-2
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		07/14/23 14:36	07/15/23 18:29	1
Ethylbenzene	<0.00201	U	0.00201		mg/Kg		07/14/23 14:36	07/15/23 18:29	1
Toluene	<0.00201	U	0.00201		mg/Kg		07/14/23 14:36	07/15/23 18:29	1
Xylenes, Total	<0.00402	U	0.00402		mg/Kg		07/14/23 14:36	07/15/23 18:29	1
m-Xylene & p-Xylene	<0.00402	U	0.00402		mg/Kg		07/14/23 14:36	07/15/23 18:29	1
o-Xylene	<0.00201	U	0.00201		mg/Kg		07/14/23 14:36	07/15/23 18:29	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*86*		*70 - 130*	*07/14/23 14:36*	*07/15/23 18:29*	*1*
1,4-Difluorobenzene (Surr)	*95*		*70 - 130*	*07/14/23 14:36*	*07/15/23 18:29*	*1*

Client Sample Results

Client: Vertex
Project/Site: Corral Fly

Job ID: 890-4931-1
SDG: 23E-02502

Client Sample ID: BES 23-22 0.5'
Date Collected: 07/11/23 10:05
Date Received: 07/12/23 09:54

Lab Sample ID: 890-4931-2
Matrix: Solid

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			07/17/23 13:55	1

Method: SW846 8015 NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**147**		49.9		mg/Kg			07/26/23 13:31	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		07/19/23 10:30	07/25/23 18:21	1
Diesel Range Organics (Over C10-C28)	**147**		49.9		mg/Kg		07/19/23 10:30	07/25/23 18:21	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		07/19/23 10:30	07/25/23 18:21	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*78*		*70 - 130*	*07/19/23 10:30*	*07/25/23 18:21*	*1*
o-Terphenyl	*91*		*70 - 130*	*07/19/23 10:30*	*07/25/23 18:21*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**165**		5.04		mg/Kg			07/14/23 17:18	1

Client Sample ID: BES 23-23 0.5'
Date Collected: 07/11/23 10:10
Date Received: 07/12/23 09:54

Lab Sample ID: 890-4931-3
Matrix: Solid

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		07/14/23 14:36	07/15/23 18:49	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		07/14/23 14:36	07/15/23 18:49	1
Toluene	<0.00200	U	0.00200		mg/Kg		07/14/23 14:36	07/15/23 18:49	1
Xylenes, Total	<0.00401	U	0.00401		mg/Kg		07/14/23 14:36	07/15/23 18:49	1
m-Xylene & p-Xylene	<0.00401	U	0.00401		mg/Kg		07/14/23 14:36	07/15/23 18:49	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		07/14/23 14:36	07/15/23 18:49	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*90*		*70 - 130*	*07/14/23 14:36*	*07/15/23 18:49*	*1*
1,4-Difluorobenzene (Surr)	*91*		*70 - 130*	*07/14/23 14:36*	*07/15/23 18:49*	*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			07/17/23 13:55	1

Method: SW846 8015 NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**82.4**		49.8		mg/Kg			07/26/23 13:31	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		07/19/23 10:30	07/25/23 18:43	1
Diesel Range Organics (Over C10-C28)	**82.4**		49.8		mg/Kg		07/19/23 10:30	07/25/23 18:43	1

Client Sample Results

Client: Vertex
Project/Site: Corral Fly

Job ID: 890-4931-1
SDG: 23E-02502

Client Sample ID: BES 23-23 0.5'

Lab Sample ID: 890-4931-3
Matrix: Solid
Date Collected: 07/11/23 10:10
Date Received: 07/12/23 09:54

Method: SW846 8015B NM - Diesel Range Organics (DRO) (GC) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Oll Range Organics (Over C28-C36)	<49.8	U	49.8		mg/Kg		07/19/23 10:30	07/25/23 18:43	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*78*		*70 - 130*	*07/19/23 10:30*	*07/25/23 18:43*	*1*
o-Terphenyl	*88*		*70 - 130*	*07/19/23 10:30*	*07/25/23 18:43*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**810**		5.02		mg/Kg			07/14/23 17:23	1

Client Sample ID: BES 23-24 0.5'

Lab Sample ID: 890-4931-4
Matrix: Solid
Date Collected: 07/11/23 10:15
Date Received: 07/12/23 09:54

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		07/14/23 14:36	07/15/23 19:10	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		07/14/23 14:36	07/15/23 19:10	1
Toluene	<0.00199	U	0.00199		mg/Kg		07/14/23 14:36	07/15/23 19:10	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		07/14/23 14:36	07/15/23 19:10	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		07/14/23 14:36	07/15/23 19:10	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		07/14/23 14:36	07/15/23 19:10	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*82*		*70 - 130*	*07/14/23 14:36*	*07/15/23 19:10*	*1*
1,4-Difluorobenzene (Surr)	*95*		*70 - 130*	*07/14/23 14:36*	*07/15/23 19:10*	*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			07/17/23 13:55	1

Method: SW846 8015 NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**61.9**		49.6		mg/Kg			07/26/23 13:31	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	<49.6	U	49.6		mg/Kg		07/19/23 10:30	07/25/23 19:05	1
Diesel Range Organics (Over C10-C28)	**61.9**		49.6		mg/Kg		07/19/23 10:30	07/25/23 19:05	1
Oll Range Organics (Over C28-C36)	<49.6	U	49.6		mg/Kg		07/19/23 10:30	07/25/23 19:05	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*82*		*70 - 130*	*07/19/23 10:30*	*07/25/23 19:05*	*1*
o-Terphenyl	*95*		*70 - 130*	*07/19/23 10:30*	*07/25/23 19:05*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**203**		4.98		mg/Kg			07/14/23 17:28	1

Client Sample Results

Client: Vertex
Project/Site: Corral Fly

Job ID: 890-4931-1
SDG: 23E-02502

Client Sample ID: BES 23-25 0.5'
Date Collected: 07/11/23 10:20
Date Received: 07/12/23 09:54

Lab Sample ID: 890-4931-5
Matrix: Solid

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00198	U	0.00198		mg/Kg		07/14/23 14:36	07/15/23 19:30	1
Ethylbenzene	<0.00198	U	0.00198		mg/Kg		07/14/23 14:36	07/15/23 19:30	1
Toluene	<0.00198	U	0.00198		mg/Kg		07/14/23 14:36	07/15/23 19:30	1
Xylenes, Total	<0.00396	U	0.00396		mg/Kg		07/14/23 14:36	07/15/23 19:30	1
m-Xylene & p-Xylene	<0.00396	U	0.00396		mg/Kg		07/14/23 14:36	07/15/23 19:30	1
o-Xylene	<0.00198	U	0.00198		mg/Kg		07/14/23 14:36	07/15/23 19:30	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*92*		*70 - 130*	*07/14/23 14:36*	*07/15/23 19:30*	*1*
1,4-Difluorobenzene (Surr)	*94*		*70 - 130*	*07/14/23 14:36*	*07/15/23 19:30*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00396	U	0.00396		mg/Kg			07/17/23 13:55	1

Method: SW846 8015 NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**60.0**		49.6		mg/Kg			07/26/23 13:31	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	<49.6	U	49.6		mg/Kg		07/19/23 10:30	07/25/23 19:27	1
Diesel Range Organics (Over C10-C28)	**60.0**		49.6		mg/Kg		07/19/23 10:30	07/25/23 19:27	1
Oil Range Organics (Over C28-C36)	<49.6	U	49.6		mg/Kg		07/19/23 10:30	07/25/23 19:27	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*78*		*70 - 130*	*07/19/23 10:30*	*07/25/23 19:27*	*1*
o-Terphenyl	*89*		*70 - 130*	*07/19/23 10:30*	*07/25/23 19:27*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**771**		25.2		mg/Kg			07/14/23 17:33	5

Client Sample ID: BES 23-26 0.5'
Date Collected: 07/11/23 10:25
Date Received: 07/12/23 09:54

Lab Sample ID: 890-4931-6
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		07/14/23 14:36	07/15/23 19:50	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		07/14/23 14:36	07/15/23 19:50	1
Toluene	<0.00199	U	0.00199		mg/Kg		07/14/23 14:36	07/15/23 19:50	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		07/14/23 14:36	07/15/23 19:50	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		07/14/23 14:36	07/15/23 19:50	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		07/14/23 14:36	07/15/23 19:50	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*83*		*70 - 130*	*07/14/23 14:36*	*07/15/23 19:50*	*1*
1,4-Difluorobenzene (Surr)	*92*		*70 - 130*	*07/14/23 14:36*	*07/15/23 19:50*	*1*

Client Sample Results

Client: Vertex
Project/Site: Corral Fly

Job ID: 890-4931-1
SDG: 23E-02502

Client Sample ID: BES 23-26 0.5'
Date Collected: 07/11/23 10:25
Date Received: 07/12/23 09:54

Lab Sample ID: 890-4931-6
Matrix: Solid

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			07/17/23 13:55	1

Method: SW846 8015 NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**57.4**		49.5		mg/Kg			07/26/23 13:31	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	<49.5	U	49.5		mg/Kg		07/19/23 10:30	07/25/23 19:49	1
Diesel Range Organics (Over C10-C28)	**57.4**		49.5		mg/Kg		07/19/23 10:30	07/25/23 19:49	1
Oil Range Organics (Over C28-C36)	<49.5	U	49.5		mg/Kg		07/19/23 10:30	07/25/23 19:49	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*72*		*70 - 130*	*07/19/23 10:30*	*07/25/23 19:49*	*1*
o-Terphenyl	*85*		*70 - 130*	*07/19/23 10:30*	*07/25/23 19:49*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**291**		5.04		mg/Kg			07/14/23 17:38	1

Client Sample ID: BES 23-27 0.5'
Date Collected: 07/11/23 10:30
Date Received: 07/12/23 09:54

Lab Sample ID: 890-4931-7
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		07/14/23 14:36	07/15/23 20:11	1
Ethylbenzene	<0.00202	U	0.00202		mg/Kg		07/14/23 14:36	07/15/23 20:11	1
Toluene	<0.00202	U	0.00202		mg/Kg		07/14/23 14:36	07/15/23 20:11	1
Xylenes, Total	<0.00404	U	0.00404		mg/Kg		07/14/23 14:36	07/15/23 20:11	1
m-Xylene & p-Xylene	<0.00404	U	0.00404		mg/Kg		07/14/23 14:36	07/15/23 20:11	1
o-Xylene	<0.00202	U	0.00202		mg/Kg		07/14/23 14:36	07/15/23 20:11	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*86*		*70 - 130*	*07/14/23 14:36*	*07/15/23 20:11*	*1*
1,4-Difluorobenzene (Surr)	*97*		*70 - 130*	*07/14/23 14:36*	*07/15/23 20:11*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00404	U	0.00404		mg/Kg			07/17/23 13:55	1

Method: SW846 8015 NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**56.4**		50.5		mg/Kg			07/26/23 13:31	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	<50.5	U	50.5		mg/Kg		07/19/23 10:30	07/25/23 20:11	1
Diesel Range Organics (Over C10-C28)	**56.4**		50.5		mg/Kg		07/19/23 10:30	07/25/23 20:11	1

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Client Sample Results

Client: Vertex
Project/Site: Corral Fly

Job ID: 890-4931-1
SDG: 23E-02502

Client Sample ID: BES 23-27 0.5'

Lab Sample ID: 890-4931-7
Matrix: Solid
Date Collected: 07/11/23 10:30
Date Received: 07/12/23 09:54

Method: SW846 8015B NM - Diesel Range Organics (DRO) (GC) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Oll Range Organics (Over C28-C36)	<50.5	U	50.5		mg/Kg		07/19/23 10:30	07/25/23 20:11	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*77*		*70 - 130*	*07/19/23 10:30*	*07/25/23 20:11*	*1*
o-Terphenyl	*87*		*70 - 130*	*07/19/23 10:30*	*07/25/23 20:11*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**75.8**		5.01		mg/Kg			07/14/23 17:53	1

Client Sample ID: BES 23-28 0.5'

Lab Sample ID: 890-4931-8
Matrix: Solid
Date Collected: 07/11/23 10:35
Date Received: 07/12/23 09:54

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		07/14/23 14:36	07/15/23 20:31	1
Ethylbenzene	<0.00201	U	0.00201		mg/Kg		07/14/23 14:36	07/15/23 20:31	1
Toluene	<0.00201	U	0.00201		mg/Kg		07/14/23 14:36	07/15/23 20:31	1
Xylenes, Total	<0.00402	U	0.00402		mg/Kg		07/14/23 14:36	07/15/23 20:31	1
m-Xylene & p-Xylene	<0.00402	U	0.00402		mg/Kg		07/14/23 14:36	07/15/23 20:31	1
o-Xylene	<0.00201	U	0.00201		mg/Kg		07/14/23 14:36	07/15/23 20:31	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*74*		*70 - 130*	*07/14/23 14:36*	*07/15/23 20:31*	*1*
1,4-Difluorobenzene (Surr)	*95*		*70 - 130*	*07/14/23 14:36*	*07/15/23 20:31*	*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			07/17/23 13:55	1

Method: SW846 8015 NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**95.4**		50.4		mg/Kg			07/26/23 13:31	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	<50.4	U	50.4		mg/Kg		07/19/23 10:30	07/25/23 20:34	1
Diesel Range Organics (Over C10-C28)	**95.4**		50.4		mg/Kg		07/19/23 10:30	07/25/23 20:34	1
Oll Range Organics (Over C28-C36)	<50.4	U	50.4		mg/Kg		07/19/23 10:30	07/25/23 20:34	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*74*		*70 - 130*	*07/19/23 10:30*	*07/25/23 20:34*	*1*
o-Terphenyl	*81*		*70 - 130*	*07/19/23 10:30*	*07/25/23 20:34*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**207**		4.98		mg/Kg			07/14/23 17:58	1

Client Sample Results

Client: Vertex
Project/Site: Corral Fly

Job ID: 890-4931-1
SDG: 23E-02502

Client Sample ID: BES 23-29 0.5'
Date Collected: 07/11/23 10:40
Date Received: 07/12/23 09:54

Lab Sample ID: 890-4931-9
Matrix: Solid

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		07/14/23 14:36	07/15/23 20:52	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		07/14/23 14:36	07/15/23 20:52	1
Toluene	<0.00200	U	0.00200		mg/Kg		07/14/23 14:36	07/15/23 20:52	1
Xylenes, Total	<0.00399	U	0.00399		mg/Kg		07/14/23 14:36	07/15/23 20:52	1
m-Xylene & p-Xylene	<0.00399	U	0.00399		mg/Kg		07/14/23 14:36	07/15/23 20:52	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		07/14/23 14:36	07/15/23 20:52	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*88*		*70 - 130*	*07/14/23 14:36*	*07/15/23 20:52*	*1*
1,4-Difluorobenzene (Surr)	*91*		*70 - 130*	*07/14/23 14:36*	*07/15/23 20:52*	*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			07/17/23 13:55	1

Method: SW846 8015 NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.3	U	50.3		mg/Kg			07/26/23 13:31	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	<50.3	U	50.3		mg/Kg		07/19/23 10:30	07/25/23 20:56	1
Diesel Range Organics (Over C10-C28)	<50.3	U	50.3		mg/Kg		07/19/23 10:30	07/25/23 20:56	1
Oil Range Organics (Over C28-C36)	<50.3	U	50.3		mg/Kg		07/19/23 10:30	07/25/23 20:56	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*70*		*70 - 130*	*07/19/23 10:30*	*07/25/23 20:56*	*1*
o-Terphenyl	*80*		*70 - 130*	*07/19/23 10:30*	*07/25/23 20:56*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**414**		4.98		mg/Kg			07/14/23 18:13	1

Surrogate Summary

Client: Vertex
Project/Site: Corral Fly

Job ID: 890-4931-1
SDG: 23E-02502

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)
890-4931-1	BES 23-21 0.5'	80	93
890-4931-1 MS	BES 23-21 0.5'	99	92
890-4931-1 MSD	BES 23-21 0.5'	91	93
890-4931-2	BES 23-22 0.5'	86	95
890-4931-3	BES 23-23 0.5'	90	91
890-4931-4	BES 23-24 0.5'	82	95
890-4931-5	BES 23-25 0.5'	92	94
890-4931-6	BES 23-26 0.5'	83	92
890-4931-7	BES 23-27 0.5'	86	97
890-4931-8	BES 23-28 0.5'	74	95
890-4931-9	BES 23-29 0.5'	88	91
LCS 880-57706/1-A	Lab Control Sample	97	92
LCSD 880-57706/2-A	Lab Control Sample Dup	103	93
MB 880-57706/5-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)
890-4931-1	BES 23-21 0.5'	75	89
890-4931-1 MS	BES 23-21 0.5'	9 S1-	16 S1-
890-4931-1 MSD	BES 23-21 0.5'	9 S1-	8 S1-
890-4931-2	BES 23-22 0.5'	78	91
890-4931-3	BES 23-23 0.5'	78	88
890-4931-4	BES 23-24 0.5'	82	95
890-4931-5	BES 23-25 0.5'	78	89
890-4931-6	BES 23-26 0.5'	72	85
890-4931-7	BES 23-27 0.5'	77	87
890-4931-8	BES 23-28 0.5'	74	81
890-4931-9	BES 23-29 0.5'	70	80
LCS 880-58016/2-A	Lab Control Sample	95	95
LCSD 880-58016/3-A	Lab Control Sample Dup	86	87
MB 880-58016/1-A	Method Blank	79	88

Surrogate Legend

1CO = 1-Chlorooctane
OTPH = o-Terphenyl

QC Sample Results

Client: Vertex
Project/Site: Corral Fly

Job ID: 890-4931-1
SDG: 23E-02502

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-57706/5-A
Matrix: Solid
Analysis Batch: 57752

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 57706

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		07/14/23 14:36	07/15/23 17:39	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		07/14/23 14:36	07/15/23 17:39	1
Toluene	<0.00200	U	0.00200		mg/Kg		07/14/23 14:36	07/15/23 17:39	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		07/14/23 14:36	07/15/23 17:39	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		07/14/23 14:36	07/15/23 17:39	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		07/14/23 14:36	07/15/23 17:39	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*91*		*70 - 130*	*07/14/23 14:36*	*07/15/23 17:39*	*1*
1,4-Difluorobenzene (Surr)	*110*		*70 - 130*	*07/14/23 14:36*	*07/15/23 17:39*	*1*

Lab Sample ID: LCS 880-57706/1-A
Matrix: Solid
Analysis Batch: 57752

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 57706

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	0.100	0.08059		mg/Kg		81	70 - 130
Ethylbenzene	0.100	0.07726		mg/Kg		77	70 - 130
Toluene	0.100	0.09173		mg/Kg		92	70 - 130
m-Xylene & p-Xylene	0.200	0.1625		mg/Kg		81	70 - 130
o-Xylene	0.100	0.07434		mg/Kg		74	70 - 130

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*97*		*70 - 130*
1,4-Difluorobenzene (Surr)	*92*		*70 - 130*

Lab Sample ID: LCSD 880-57706/2-A
Matrix: Solid
Analysis Batch: 57752

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 57706

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	0.100	0.08691		mg/Kg		87	70 - 130	8	35
Ethylbenzene	0.100	0.08840		mg/Kg		88	70 - 130	13	35
Toluene	0.100	0.1013		mg/Kg		101	70 - 130	10	35
m-Xylene & p-Xylene	0.200	0.1819		mg/Kg		91	70 - 130	11	35
o-Xylene	0.100	0.08739		mg/Kg		87	70 - 130	16	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*103*		*70 - 130*
1,4-Difluorobenzene (Surr)	*93*		*70 - 130*

Lab Sample ID: 890-4931-1 MS
Matrix: Solid
Analysis Batch: 57752

Client Sample ID: BES 23-21 0.5'
Prep Type: Total/NA
Prep Batch: 57706

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	<0.00202	U	0.0994	0.09181		mg/Kg		92	70 - 130
Ethylbenzene	<0.00202	U	0.0994	0.08545		mg/Kg		86	70 - 130

QC Sample Results

Client: Vertex
Project/Site: Corral Fly

Job ID: 890-4931-1
SDG: 23E-02502

Method: 8021B - Volatile Organic Compounds (GC) (Continued)

Lab Sample ID: 890-4931-1 MS
Matrix: Solid
Analysis Batch: 57752

Client Sample ID: BES 23-21 0.5'
Prep Type: Total/NA
Prep Batch: 57706

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Toluene	<0.00202	U	0.0994	0.1034		mg/Kg		104	70 - 130
m-Xylene & p-Xylene	<0.00403	U	0.199	0.1713		mg/Kg		86	70 - 130
o-Xylene	<0.00202	U	0.0994	0.09163		mg/Kg		92	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*99*		*70 - 130*
1,4-Difluorobenzene (Surr)	*92*		*70 - 130*

Lab Sample ID: 890-4931-1 MSD
Matrix: Solid
Analysis Batch: 57752

Client Sample ID: BES 23-21 0.5'
Prep Type: Total/NA
Prep Batch: 57706

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	<0.00202	U	0.0998	0.08348		mg/Kg		84	70 - 130	10	35
Ethylbenzene	<0.00202	U	0.0998	0.07256		mg/Kg		73	70 - 130	16	35
Toluene	<0.00202	U	0.0998	0.09166		mg/Kg		92	70 - 130	12	35
m-Xylene & p-Xylene	<0.00403	U	0.200	0.1499		mg/Kg		75	70 - 130	13	35
o-Xylene	<0.00202	U	0.0998	0.08090		mg/Kg		81	70 - 130	12	35

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*91*		*70 - 130*
1,4-Difluorobenzene (Surr)	*93*		*70 - 130*

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

Lab Sample ID: MB 880-58016/1-A
Matrix: Solid
Analysis Batch: 58412

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 58016

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		07/19/23 10:30	07/25/23 14:31	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		07/19/23 10:30	07/25/23 14:31	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		07/19/23 10:30	07/25/23 14:31	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*79*		*70 - 130*	*07/19/23 10:30*	*07/25/23 14:31*	*1*
o-Terphenyl	*88*		*70 - 130*	*07/19/23 10:30*	*07/25/23 14:31*	*1*

Lab Sample ID: LCS 880-58016/2-A
Matrix: Solid
Analysis Batch: 58412

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 58016

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics (GRO)-C6-C10	1000	759.0		mg/Kg		76	70 - 130
Diesel Range Organics (Over C10-C28)	1000	932.2		mg/Kg		93	70 - 130

QC Sample Results

Client: Vertex
Project/Site: Corral Fly

Job ID: 890-4931-1
SDG: 23E-02502

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

Lab Sample ID: LCS 880-58016/2-A
Matrix: Solid
Analysis Batch: 58412

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 58016

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1-Chlorooctane	95		70 - 130
o-Terphenyl	95		70 - 130

Lab Sample ID: LCSD 880-58016/3-A
Matrix: Solid
Analysis Batch: 58412

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 58016

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			1000	749.8		mg/Kg		75	70 - 130	1	20
Diesel Range Organics (Over C10-C28)			1000	867.5		mg/Kg		87	70 - 130	7	20

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
1-Chlorooctane	86		70 - 130
o-Terphenyl	87		70 - 130

Lab Sample ID: 890-4931-1 MS
Matrix: Solid
Analysis Batch: 58412

Client Sample ID: BES 23-21 0.5'
Prep Type: Total/NA
Prep Batch: 58016

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics (GRO)-C6-C10	<50.2	U	1000	848.5		mg/Kg		85	70 - 130
Diesel Range Organics (Over C10-C28)	92.2		1000	1028		mg/Kg		94	70 - 130

Surrogate	MS %Recovery	MS Qualifier	Limits
1-Chlorooctane	9	S1-	70 - 130
o-Terphenyl	16	S1-	70 - 130

Lab Sample ID: 890-4931-1 MSD
Matrix: Solid
Analysis Batch: 58412

Client Sample ID: BES 23-21 0.5'
Prep Type: Total/NA
Prep Batch: 58016

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	<50.2	U	1000	831.5		mg/Kg		83	70 - 130	2	20
Diesel Range Organics (Over C10-C28)	92.2		1000	993.4		mg/Kg		90	70 - 130	3	20

Surrogate	MSD %Recovery	MSD Qualifier	Limits
1-Chlorooctane	9	S1-	70 - 130
o-Terphenyl	8	S1-	70 - 130

QC Sample Results

Client: Vertex
Project/Site: Corral Fly

Job ID: 890-4931-1
SDG: 23E-02502

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-57588/1-A
Matrix: Solid
Analysis Batch: 57721

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			07/14/23 16:14	1

Lab Sample ID: LCS 880-57588/2-A
Matrix: Solid
Analysis Batch: 57721

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride			250	249.7		mg/Kg		100	90 - 110		

Lab Sample ID: LCSD 880-57588/3-A
Matrix: Solid
Analysis Batch: 57721

Client Sample ID: Lab Control Sample Dup
Prep Type: Soluble

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride			250	250.0		mg/Kg		100	90 - 110	0	20

Lab Sample ID: 890-4931-6 MS
Matrix: Solid
Analysis Batch: 57721

Client Sample ID: BES 23-26 0.5'
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride	291		252	539.9		mg/Kg		99	90 - 110		

Lab Sample ID: 890-4931-6 MSD
Matrix: Solid
Analysis Batch: 57721

Client Sample ID: BES 23-26 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	291		252	538.1		mg/Kg		98	90 - 110	0	20

QC Association Summary

Client: Vertex
Project/Site: Corral Fly

Job ID: 890-4931-1
SDG: 23E-02502

GC VOA

Prep Batch: 57706

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4931-1	BES 23-21 0.5'	Total/NA	Solid	5035	
890-4931-2	BES 23-22 0.5'	Total/NA	Solid	5035	
890-4931-3	BES 23-23 0.5'	Total/NA	Solid	5035	
890-4931-4	BES 23-24 0.5'	Total/NA	Solid	5035	
890-4931-5	BES 23-25 0.5'	Total/NA	Solid	5035	
890-4931-6	BES 23-26 0.5'	Total/NA	Solid	5035	
890-4931-7	BES 23-27 0.5'	Total/NA	Solid	5035	
890-4931-8	BES 23-28 0.5'	Total/NA	Solid	5035	
890-4931-9	BES 23-29 0.5'	Total/NA	Solid	5035	
MB 880-57706/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-57706/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-57706/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
890-4931-1 MS	BES 23-21 0.5'	Total/NA	Solid	5035	
890-4931-1 MSD	BES 23-21 0.5'	Total/NA	Solid	5035	

Analysis Batch: 57752

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4931-1	BES 23-21 0.5'	Total/NA	Solid	8021B	57706
890-4931-2	BES 23-22 0.5'	Total/NA	Solid	8021B	57706
890-4931-3	BES 23-23 0.5'	Total/NA	Solid	8021B	57706
890-4931-4	BES 23-24 0.5'	Total/NA	Solid	8021B	57706
890-4931-5	BES 23-25 0.5'	Total/NA	Solid	8021B	57706
890-4931-6	BES 23-26 0.5'	Total/NA	Solid	8021B	57706
890-4931-7	BES 23-27 0.5'	Total/NA	Solid	8021B	57706
890-4931-8	BES 23-28 0.5'	Total/NA	Solid	8021B	57706
890-4931-9	BES 23-29 0.5'	Total/NA	Solid	8021B	57706
MB 880-57706/5-A	Method Blank	Total/NA	Solid	8021B	57706
LCS 880-57706/1-A	Lab Control Sample	Total/NA	Solid	8021B	57706
LCSD 880-57706/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	57706
890-4931-1 MS	BES 23-21 0.5'	Total/NA	Solid	8021B	57706
890-4931-1 MSD	BES 23-21 0.5'	Total/NA	Solid	8021B	57706

Analysis Batch: 57845

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4931-1	BES 23-21 0.5'	Total/NA	Solid	Total BTEX	
890-4931-2	BES 23-22 0.5'	Total/NA	Solid	Total BTEX	
890-4931-3	BES 23-23 0.5'	Total/NA	Solid	Total BTEX	
890-4931-4	BES 23-24 0.5'	Total/NA	Solid	Total BTEX	
890-4931-5	BES 23-25 0.5'	Total/NA	Solid	Total BTEX	
890-4931-6	BES 23-26 0.5'	Total/NA	Solid	Total BTEX	
890-4931-7	BES 23-27 0.5'	Total/NA	Solid	Total BTEX	
890-4931-8	BES 23-28 0.5'	Total/NA	Solid	Total BTEX	
890-4931-9	BES 23-29 0.5'	Total/NA	Solid	Total BTEX	

GC Semi VOA

Prep Batch: 58016

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4931-1	BES 23-21 0.5'	Total/NA	Solid	8015NM Prep	
890-4931-2	BES 23-22 0.5'	Total/NA	Solid	8015NM Prep	
890-4931-3	BES 23-23 0.5'	Total/NA	Solid	8015NM Prep	

QC Association Summary

Client: Vertex
Project/Site: Corral Fly

Job ID: 890-4931-1
SDG: 23E-02502

GC Semi VOA (Continued)

Prep Batch: 58016 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4931-4	BES 23-24 0.5'	Total/NA	Solid	8015NM Prep	
890-4931-5	BES 23-25 0.5'	Total/NA	Solid	8015NM Prep	
890-4931-6	BES 23-26 0.5'	Total/NA	Solid	8015NM Prep	
890-4931-7	BES 23-27 0.5'	Total/NA	Solid	8015NM Prep	
890-4931-8	BES 23-28 0.5'	Total/NA	Solid	8015NM Prep	
890-4931-9	BES 23-29 0.5'	Total/NA	Solid	8015NM Prep	
MB 880-58016/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-58016/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-58016/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-4931-1 MS	BES 23-21 0.5'	Total/NA	Solid	8015NM Prep	
890-4931-1 MSD	BES 23-21 0.5'	Total/NA	Solid	8015NM Prep	

Analysis Batch: 58412

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4931-1	BES 23-21 0.5'	Total/NA	Solid	8015B NM	58016
890-4931-2	BES 23-22 0.5'	Total/NA	Solid	8015B NM	58016
890-4931-3	BES 23-23 0.5'	Total/NA	Solid	8015B NM	58016
890-4931-4	BES 23-24 0.5'	Total/NA	Solid	8015B NM	58016
890-4931-5	BES 23-25 0.5'	Total/NA	Solid	8015B NM	58016
890-4931-6	BES 23-26 0.5'	Total/NA	Solid	8015B NM	58016
890-4931-7	BES 23-27 0.5'	Total/NA	Solid	8015B NM	58016
890-4931-8	BES 23-28 0.5'	Total/NA	Solid	8015B NM	58016
890-4931-9	BES 23-29 0.5'	Total/NA	Solid	8015B NM	58016
MB 880-58016/1-A	Method Blank	Total/NA	Solid	8015B NM	58016
LCS 880-58016/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	58016
LCSD 880-58016/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	58016
890-4931-1 MS	BES 23-21 0.5'	Total/NA	Solid	8015B NM	58016
890-4931-1 MSD	BES 23-21 0.5'	Total/NA	Solid	8015B NM	58016

Analysis Batch: 58566

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4931-1	BES 23-21 0.5'	Total/NA	Solid	8015 NM	
890-4931-2	BES 23-22 0.5'	Total/NA	Solid	8015 NM	
890-4931-3	BES 23-23 0.5'	Total/NA	Solid	8015 NM	
890-4931-4	BES 23-24 0.5'	Total/NA	Solid	8015 NM	
890-4931-5	BES 23-25 0.5'	Total/NA	Solid	8015 NM	
890-4931-6	BES 23-26 0.5'	Total/NA	Solid	8015 NM	
890-4931-7	BES 23-27 0.5'	Total/NA	Solid	8015 NM	
890-4931-8	BES 23-28 0.5'	Total/NA	Solid	8015 NM	
890-4931-9	BES 23-29 0.5'	Total/NA	Solid	8015 NM	

HPLC/IC

Leach Batch: 57588

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4931-1	BES 23-21 0.5'	Soluble	Solid	DI Leach	
890-4931-2	BES 23-22 0.5'	Soluble	Solid	DI Leach	
890-4931-3	BES 23-23 0.5'	Soluble	Solid	DI Leach	
890-4931-4	BES 23-24 0.5'	Soluble	Solid	DI Leach	
890-4931-5	BES 23-25 0.5'	Soluble	Solid	DI Leach	
890-4931-6	BES 23-26 0.5'	Soluble	Solid	DI Leach	

QC Association Summary

Client: Vertex
Project/Site: Corral Fly

Job ID: 890-4931-1
SDG: 23E-02502

HPLC/IC (Continued)

Leach Batch: 57588 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4931-7	BES 23-27 0.5'	Soluble	Solid	DI Leach	
890-4931-8	BES 23-28 0.5'	Soluble	Solid	DI Leach	
890-4931-9	BES 23-29 0.5'	Soluble	Solid	DI Leach	
MB 880-57588/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-57588/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-57588/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-4931-6 MS	BES 23-26 0.5'	Soluble	Solid	DI Leach	
890-4931-6 MSD	BES 23-26 0.5'	Soluble	Solid	DI Leach	

Analysis Batch: 57721

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4931-1	BES 23-21 0.5'	Soluble	Solid	300.0	57588
890-4931-2	BES 23-22 0.5'	Soluble	Solid	300.0	57588
890-4931-3	BES 23-23 0.5'	Soluble	Solid	300.0	57588
890-4931-4	BES 23-24 0.5'	Soluble	Solid	300.0	57588
890-4931-5	BES 23-25 0.5'	Soluble	Solid	300.0	57588
890-4931-6	BES 23-26 0.5'	Soluble	Solid	300.0	57588
890-4931-7	BES 23-27 0.5'	Soluble	Solid	300.0	57588
890-4931-8	BES 23-28 0.5'	Soluble	Solid	300.0	57588
890-4931-9	BES 23-29 0.5'	Soluble	Solid	300.0	57588
MB 880-57588/1-A	Method Blank	Soluble	Solid	300.0	57588
LCS 880-57588/2-A	Lab Control Sample	Soluble	Solid	300.0	57588
LCSD 880-57588/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	57588
890-4931-6 MS	BES 23-26 0.5'	Soluble	Solid	300.0	57588
890-4931-6 MSD	BES 23-26 0.5'	Soluble	Solid	300.0	57588

Lab Chronicle

Client: Vertex
Project/Site: Corral Fly

Job ID: 890-4931-1
SDG: 23E-02502

Client Sample ID: BES 23-21 0.5'
Date Collected: 07/11/23 10:00
Date Received: 07/12/23 09:54

Lab Sample ID: 890-4931-1
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	57706	07/14/23 14:36	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	57752	07/15/23 18:08	AJ	EET MID
Total/NA	Analysis	Total BTEX		1			57845	07/17/23 13:55	AJ	EET MID
Total/NA	Analysis	8015 NM		1			58566	07/26/23 13:31	SM	EET MID
Total/NA	Prep	8015NM Prep			9.96 g	10 mL	58016	07/19/23 10:30	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	58412	07/25/23 17:14	SM	EET MID
Soluble	Leach	DI Leach			5 g	50 mL	57588	07/13/23 10:51	KS	EET MID
Soluble	Analysis	300.0		1			57721	07/14/23 17:13	CH	EET MID

Client Sample ID: BES 23-22 0.5'
Date Collected: 07/11/23 10:05
Date Received: 07/12/23 09:54

Lab Sample ID: 890-4931-2
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	57706	07/14/23 14:36	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	57752	07/15/23 18:29	AJ	EET MID
Total/NA	Analysis	Total BTEX		1			57845	07/17/23 13:55	AJ	EET MID
Total/NA	Analysis	8015 NM		1			58566	07/26/23 13:31	SM	EET MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	58016	07/19/23 10:30	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	58412	07/25/23 18:21	SM	EET MID
Soluble	Leach	DI Leach			4.96 g	50 mL	57588	07/13/23 10:51	KS	EET MID
Soluble	Analysis	300.0		1			57721	07/14/23 17:18	CH	EET MID

Client Sample ID: BES 23-23 0.5'
Date Collected: 07/11/23 10:10
Date Received: 07/12/23 09:54

Lab Sample ID: 890-4931-3
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	5035			4.99 g	5 mL	57706	07/14/23 14:36	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	57752	07/15/23 18:49	AJ	EET MID
Total/NA	Analysis	Total BTEX		1			57845	07/17/23 13:55	AJ	EET MID
Total/NA	Analysis	8015 NM		1			58566	07/26/23 13:31	SM	EET MID
Total/NA	Prep	8015NM Prep			10.04 g	10 mL	58016	07/19/23 10:30	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	58412	07/25/23 18:43	SM	EET MID
Soluble	Leach	DI Leach			4.98 g	50 mL	57588	07/13/23 10:51	KS	EET MID
Soluble	Analysis	300.0		1			57721	07/14/23 17:23	CH	EET MID

Client Sample ID: BES 23-24 0.5'
Date Collected: 07/11/23 10:15
Date Received: 07/12/23 09:54

Lab Sample ID: 890-4931-4
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	5035			5.03 g	5 mL	57706	07/14/23 14:36	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	57752	07/15/23 19:10	AJ	EET MID
Total/NA	Analysis	Total BTEX		1			57845	07/17/23 13:55	AJ	EET MID

Lab Chronicle

Client: Vertex
Project/Site: Corral Fly

Job ID: 890-4931-1
SDG: 23E-02502

Client Sample ID: BES 23-24 0.5'
Date Collected: 07/11/23 10:15
Date Received: 07/12/23 09:54

Lab Sample ID: 890-4931-4
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8015 NM		1			58566	07/26/23 13:31	SM	EET MID
Total/NA	Prep	8015NM Prep			10.08 g	10 mL	58016	07/19/23 10:30	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	58412	07/25/23 19:05	SM	EET MID
Soluble	Leach	DI Leach			5.02 g	50 mL	57588	07/13/23 10:51	KS	EET MID
Soluble	Analysis	300.0		1			57721	07/14/23 17:28	CH	EET MID

Client Sample ID: BES 23-25 0.5'
Date Collected: 07/11/23 10:20
Date Received: 07/12/23 09:54

Lab Sample ID: 890-4931-5
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	5035			5.05 g	5 mL	57706	07/14/23 14:36	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	57752	07/15/23 19:30	AJ	EET MID
Total/NA	Analysis	Total BTEX		1			57845	07/17/23 13:55	AJ	EET MID
Total/NA	Analysis	8015 NM		1			58566	07/26/23 13:31	SM	EET MID
Total/NA	Prep	8015NM Prep			10.09 g	10 mL	58016	07/19/23 10:30	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	58412	07/25/23 19:27	SM	EET MID
Soluble	Leach	DI Leach			4.97 g	50 mL	57588	07/13/23 10:51	KS	EET MID
Soluble	Analysis	300.0		5			57721	07/14/23 17:33	CH	EET MID

Client Sample ID: BES 23-26 0.5'
Date Collected: 07/11/23 10:25
Date Received: 07/12/23 09:54

Lab Sample ID: 890-4931-6
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	5035			5.02 g	5 mL	57706	07/14/23 14:36	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	57752	07/15/23 19:50	AJ	EET MID
Total/NA	Analysis	Total BTEX		1			57845	07/17/23 13:55	AJ	EET MID
Total/NA	Analysis	8015 NM		1			58566	07/26/23 13:31	SM	EET MID
Total/NA	Prep	8015NM Prep			10.10 g	10 mL	58016	07/19/23 10:30	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	58412	07/25/23 19:49	SM	EET MID
Soluble	Leach	DI Leach			4.96 g	50 mL	57588	07/13/23 10:51	KS	EET MID
Soluble	Analysis	300.0		1			57721	07/14/23 17:38	CH	EET MID

Client Sample ID: BES 23-27 0.5'
Date Collected: 07/11/23 10:30
Date Received: 07/12/23 09:54

Lab Sample ID: 890-4931-7
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	5035			4.95 g	5 mL	57706	07/14/23 14:36	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	57752	07/15/23 20:11	AJ	EET MID
Total/NA	Analysis	Total BTEX		1			57845	07/17/23 13:55	AJ	EET MID
Total/NA	Analysis	8015 NM		1			58566	07/26/23 13:31	SM	EET MID
Total/NA	Prep	8015NM Prep			9.91 g	10 mL	58016	07/19/23 10:30	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	58412	07/25/23 20:11	SM	EET MID

Lab Chronicle

Client: Vertex
Project/Site: Corral Fly

Job ID: 890-4931-1
SDG: 23E-02502

Client Sample ID: BES 23-27 0.5'
Date Collected: 07/11/23 10:30
Date Received: 07/12/23 09:54

Lab Sample ID: 890-4931-7
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Soluble	Leach	DI Leach			4.99 g	50 mL	57588	07/13/23 10:51	KS	EET MID
Soluble	Analysis	300.0		1			57721	07/14/23 17:53	CH	EET MID

Client Sample ID: BES 23-28 0.5'
Date Collected: 07/11/23 10:35
Date Received: 07/12/23 09:54

Lab Sample ID: 890-4931-8
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	5035			4.98 g	5 mL	57706	07/14/23 14:36	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	57752	07/15/23 20:31	AJ	EET MID
Total/NA	Analysis	Total BTEX		1			57845	07/17/23 13:55	AJ	EET MID
Total/NA	Analysis	8015 NM		1			58566	07/26/23 13:31	SM	EET MID
Total/NA	Prep	8015NM Prep			9.93 g	10 mL	58016	07/19/23 10:30	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	58412	07/25/23 20:34	SM	EET MID
Soluble	Leach	DI Leach			5.02 g	50 mL	57588	07/13/23 10:51	KS	EET MID
Soluble	Analysis	300.0		1			57721	07/14/23 17:58	CH	EET MID

Client Sample ID: BES 23-29 0.5'
Date Collected: 07/11/23 10:40
Date Received: 07/12/23 09:54

Lab Sample ID: 890-4931-9
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	5035			5.01 g	5 mL	57706	07/14/23 14:36	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	57752	07/15/23 20:52	AJ	EET MID
Total/NA	Analysis	Total BTEX		1			57845	07/17/23 13:55	AJ	EET MID
Total/NA	Analysis	8015 NM		1			58566	07/26/23 13:31	SM	EET MID
Total/NA	Prep	8015NM Prep			9.95 g	10 mL	58016	07/19/23 10:30	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	58412	07/25/23 20:56	SM	EET MID
Soluble	Leach	DI Leach			5.02 g	50 mL	57588	07/13/23 10:51	KS	EET MID
Soluble	Analysis	300.0		1			57721	07/14/23 18:13	CH	EET MID

Laboratory References:
EET MID = Eurofins Midland, 1211 W. Florida Ave, Midland, TX 79701, TEL (432)704-5440

Accreditation/Certification Summary

Client: Vertex
Project/Site: Corral Fly

Job ID: 890-4931-1
SDG: 23E-02502

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	T104704400-23-26	06-30-24

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: Vertex
Project/Site: Corral Fly

Job ID: 890-4931-1
SDG: 23E-02502

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	EPA	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
EPA = US Environmental Protection Agency
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: Vertex
Project/Site: Corral Fly

Job ID: 890-4931-1
SDG: 23E-02502

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
890-4931-1	BES 23-21 0.5'	Solid	07/11/23 10:00	07/12/23 09:54
890-4931-2	BES 23-22 0.5'	Solid	07/11/23 10:05	07/12/23 09:54
890-4931-3	BES 23-23 0.5'	Solid	07/11/23 10:10	07/12/23 09:54
890-4931-4	BES 23-24 0.5'	Solid	07/11/23 10:15	07/12/23 09:54
890-4931-5	BES 23-25 0.5'	Solid	07/11/23 10:20	07/12/23 09:54
890-4931-6	BES 23-26 0.5'	Solid	07/11/23 10:25	07/12/23 09:54
890-4931-7	BES 23-27 0.5'	Solid	07/11/23 10:30	07/12/23 09:54
890-4931-8	BES 23-28 0.5'	Solid	07/11/23 10:35	07/12/23 09:54
890-4931-9	BES 23-29 0.5'	Solid	07/11/23 10:40	07/12/23 09:54

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Chain of Custody

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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: _____

www.xenco.com Page 1 of 1

Project Manager:	Chance Dixon cdixon@vertex.	Bill to: (if different)	Rob Kirk
Company Name:	Vertex	Company Name:	Solaris
Address:		Address:	
City, State ZIP:		City, State ZIP:	
Phone:	Email:		cdixon@vertex.ca

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:	Corral Fly	Turn Around	☒ Routine ☐ Rush
Project Number:	23E-02502	Due Date:	
Project Location:		TAT starts the day received by the lab, if received by 4:30pm	
Sampler's Name:	Hunter Klein		
PO #:			

SAMPLE RECEIPT			
Temp Blank:	Yes No	Wet Ice:	Yes No
Samples Received Intact:	Yes No	Thermometer ID:	TM007
Cooler Custody Seals:	Yes No N/A	Correction Factor:	-0.2
Sample Custody Seals:	Yes No N/A	Temperature Reading:	5.2
Total Containers:		Corrected Temperature:	5.0

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

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Grab/ Comp	# of Cont	Pres. Code	Parameters: BTEX	TPH	CL	Sample Comments
BES23-21 0.5'	Soil	7/11/23	10:00			5		X	X	X	
BES23-22 0.5'			10:05								
BES23-23 0.5'			10:10								
BES23-24 0.5'			10:15								
BES23-25 0.5'			10:20								
BES23-26 0.5'			10:25								
BES23-27 0.5'			10:30								
BES23-28 0.5'			10:35								
BES23-29 0.5'			10:40								
~~BES23-30 0.5'~~			~~10:45~~								

890-4931 Chain of Custody

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	Hunter Klein	Cleve Cly	7.12.23 854			
3						
5				6		

Revised Date: 08/25/2020 Rev. 2020.2

Received by OCD: 7/24/2024 3:24:20 PM
Released to Imaging: 7/26/2024 3:59:45 PM
7/26/2023
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Login Sample Receipt Checklist

Client: Vertex

Job Number: 890-4931-1
SDG Number: 23E-02502

Login Number: 4931
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: Vertex

Job Number: 890-4931-1
SDG Number: 23E-02502

Login Number: 4931
List Number: 2
Creator: Rodriguez, Leticia

List Source: Eurofins Midland
List Creation: 07/13/23 11:48 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	

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ANALYTICAL REPORT

PREPARED FOR

Attn: Chance Dixon
Vertex
3101 Boyd Dr
Carlsbad, New Mexico 88220

Generated 7/28/2023 11:38:55 AM

JOB DESCRIPTION

Corral Fly
SDG NUMBER 23E-02502

JOB NUMBER

890-4938-1

Eurofins Carlsbad
1089 N Canal St.
Carlsbad NM 88220

See page two for job notes and contact information.

Released to Imaging: 7/28/2024 3:39:45 PM

my EOL

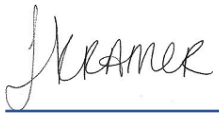
Eurofins Carlsbad

Job Notes

This report may not be reproduced except in full, and with written approval from the laboratory. The results relate only to the samples tested. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

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



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Authorized for release by
Jessica Kramer, Project Manager
Jessica.Kramer@et.eurofinsus.com
(432)704-5440

Client: Vertex
Project/Site: Corral Fly

Laboratory Job ID: 890-4938-1
SDG: 23E-02502

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Definitions/Glossary

Client: Vertex
Project/Site: Corral Fly

Job ID: 890-4938-1
SDG: 23E-02502

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
*-	LCS and/or LCSD is outside acceptance 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
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: Vertex
Project/Site: Corral Fly

Job ID: 890-4938-1
SDG: 23E-02502

Job ID: 890-4938-1

Laboratory: Eurofins Carlsbad

Narrative

Job Narrative
890-4938-1

Receipt
The samples were received on 7/12/2023 4:02 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 19.0°C

Receipt Exceptions
The following samples were received and analyzed from an unpreserved bulk soil jar: BES23-30 0.5' (890-4938-1), BES23-31 0.5' (890-4938-2), BES23-32 0.5' (890-4938-3), BES23-33 0.5' (890-4938-4), BES23-34 0.5' (890-4938-5), BES23-35 0.5' (890-4938-6), BES23-36 0.5' (890-4938-7), BES23-37 0.5' (890-4938-8), BES23-38 0.5' (890-4938-9), BES23-39 0.5' (890-4938-10) and BES23-40 0.5' (890-4938-11).

GC VOA
Method 8021B: The continuing calibration verification (CCV) associated with batch 880-57701 recovered above the upper control limit for Benzene, Ethylbenzene, Toluene, m-Xylene & p-Xylene and o-Xylene. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. The associated sample is impacted: (CCV 880-57701/64).

Method 8021B: The continuing calibration verification (CCV) associated with batch 880-57701 recovered above the upper control limit for Benzene, Ethylbenzene, Toluene, m-Xylene & p-Xylene and o-Xylene. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. The associated samples are impacted: (CCV 880-57701/82) and (CCV 880-57701/95).

Method 8021B: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 880-57703 and analytical batch 880-57701 were outside control limits for one or more analytes. See QC Sample Results for detail. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery is within acceptance limits.

Method 8021B: The continuing calibration verification (CCV) associated with batch 880-57701 recovered above the upper control limit for Benzene, Ethylbenzene, Toluene, m-Xylene & p-Xylene and o-Xylene. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. The associated sample is impacted: (CCV 880-57701/113).

Method 8021B: Surrogate recovery for the following samples were outside control limits: BES23-30 0.5' (890-4938-1), (LCS 880-57703/1-A), (LCSD 880-57703/2-A), (MB 880-57655/5-A), (890-4929-A-4-D), (890-4929-A-4-B MS) and (890-4929-A-4-C MSD). Evidence of matrix interferences is not obvious.

Method 8021B: Surrogate recovery for the following samples were outside control limits: BES23-32 0.5' (890-4938-3), BES23-33 0.5' (890-4938-4), BES23-34 0.5' (890-4938-5), BES23-37 0.5' (890-4938-8), BES23-38 0.5' (890-4938-9) and BES23-40 0.5' (890-4938-11). 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 samples were outside control limits: BES23-30 0.5' (890-4938-1), BES23-32 0.5' (890-4938-3), BES23-34 0.5' (890-4938-5), BES23-36 0.5' (890-4938-7), BES23-37 0.5' (890-4938-8), (MB 880-58171/1-A), (890-4932-A-1-C), (890-4932-A-1-D MS) and (890-4932-A-1-E MSD). Evidence of matrix interferences is not obvious.

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

HPLC/IC
Method 300_ORGFM_28D: The matrix spike / matrix spike duplicate (MS/MSD) recoveries and precision for preparation batch 880-57699 and analytical batch 880-57705 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample / laboratory sample control duplicate (LCS/LCSD) precision was within acceptance limits.

Case Narrative

Client: Vertex
Project/Site: Corral Fly

Job ID: 890-4938-1
SDG: 23E-02502

Job ID: 890-4938-1 (Continued)

Laboratory: Eurofins Carlsbad (Continued)

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

Client Sample Results

Client: Vertex
Project/Site: Corral Fly

Job ID: 890-4938-1
SDG: 23E-02502

Client Sample ID: BES23-30 0.5'

Lab Sample ID: 890-4938-1
Matrix: Solid
Date Collected: 07/12/23 10:00
Date Received: 07/12/23 16:02
Sample Depth: 0.5

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		07/14/23 14:30	07/16/23 14:35	1
Ethylbenzene	<0.00201	U	0.00201		mg/Kg		07/14/23 14:30	07/16/23 14:35	1
Toluene	<0.00201	U	0.00201		mg/Kg		07/14/23 14:30	07/16/23 14:35	1
Xylenes, Total	<0.00402	U	0.00402		mg/Kg		07/14/23 14:30	07/16/23 14:35	1
m-Xylene & p-Xylene	<0.00402	U	0.00402		mg/Kg		07/14/23 14:30	07/16/23 14:35	1
o-Xylene	<0.00201	U	0.00201		mg/Kg		07/14/23 14:30	07/16/23 14:35	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*250*	*S1+*	*70 - 130*	*07/14/23 14:30*	*07/16/23 14:35*	*1*
1,4-Difluorobenzene (Surr)	*102*		*70 - 130*	*07/14/23 14:30*	*07/16/23 14:35*	*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			07/17/23 14:47	1

Method: SW846 8015 NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.6	U	49.6		mg/Kg			07/28/23 11:50	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	<49.6	U *-	49.6		mg/Kg		07/20/23 15:49	07/28/23 01:19	1
Diesel Range Organics (Over C10-C28)	<49.6	U	49.6		mg/Kg		07/20/23 15:49	07/28/23 01:19	1
OII Range Organics (Over C28-C36)	<49.6	U	49.6		mg/Kg		07/20/23 15:49	07/28/23 01:19	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*147*	*S1+*	*70 - 130*	*07/20/23 15:49*	*07/28/23 01:19*	*1*
o-Terphenyl	*131*	*S1+*	*70 - 130*	*07/20/23 15:49*	*07/28/23 01:19*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**2940**		50.1		mg/Kg			07/15/23 01:32	10

Client Sample ID: BES23-31 0.5'

Lab Sample ID: 890-4938-2
Matrix: Solid
Date Collected: 07/12/23 10:05
Date Received: 07/12/23 16:02
Sample Depth: 0.5

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		07/17/23 12:42	07/17/23 23:09	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		07/17/23 12:42	07/17/23 23:09	1
Toluene	<0.00199	U	0.00199		mg/Kg		07/17/23 12:42	07/17/23 23:09	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		07/17/23 12:42	07/17/23 23:09	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		07/17/23 12:42	07/17/23 23:09	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		07/17/23 12:42	07/17/23 23:09	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*88*		*70 - 130*	*07/17/23 12:42*	*07/17/23 23:09*	*1*

Eurofins Carlsbad

Client Sample Results

Client: Vertex
Project/Site: Corral Fly

Job ID: 890-4938-1
SDG: 23E-02502

Client Sample ID: BES23-31 0.5'

Lab Sample ID: 890-4938-2
Matrix: Solid
Date Collected: 07/12/23 10:05
Date Received: 07/12/23 16:02
Sample Depth: 0.5

Method: SW846 8021B - Volatile Organic Compounds (GC) (Continued)

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Difluorobenzene (Surr)	*76*		*70 - 130*	*07/17/23 12:42*	*07/17/23 23:09*	*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			07/18/23 10:31	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			07/28/23 11:50	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		07/20/23 15:49	07/28/23 02:03	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		07/20/23 15:49	07/28/23 02:03	1
OII Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		07/20/23 15:49	07/28/23 02:03	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*121*		*70 - 130*	*07/20/23 15:49*	*07/28/23 02:03*	*1*
o-Terphenyl	*107*		*70 - 130*	*07/20/23 15:49*	*07/28/23 02:03*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**223**		4.99		mg/Kg			07/15/23 01:37	1

Client Sample ID: BES23-32 0.5'

Lab Sample ID: 890-4938-3
Matrix: Solid
Date Collected: 07/12/23 10:10
Date Received: 07/12/23 16:02
Sample Depth: 0.5

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		07/17/23 12:42	07/17/23 23:29	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		07/17/23 12:42	07/17/23 23:29	1
Toluene	<0.00200	U	0.00200		mg/Kg		07/17/23 12:42	07/17/23 23:29	1
Xylenes, Total	<0.00401	U	0.00401		mg/Kg		07/17/23 12:42	07/17/23 23:29	1
m-Xylene & p-Xylene	<0.00401	U	0.00401		mg/Kg		07/17/23 12:42	07/17/23 23:29	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		07/17/23 12:42	07/17/23 23:29	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*92*		*70 - 130*	*07/17/23 12:42*	*07/17/23 23:29*	*1*
1,4-Difluorobenzene (Surr)	*68*	*S1-*	*70 - 130*	*07/17/23 12:42*	*07/17/23 23:29*	*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			07/18/23 10:31	1

Method: SW846 8015 NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**1220**		50.3		mg/Kg			07/28/23 11:50	1

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Client Sample Results

Client: Vertex
Project/Site: Corral Fly

Job ID: 890-4938-1
SDG: 23E-02502

Client Sample ID: BES23-32 0.5'

Lab Sample ID: 890-4938-3
Matrix: Solid
Date Collected: 07/12/23 10:10
Date Received: 07/12/23 16:02
Sample Depth: 0.5

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	<50.3	U *-	50.3		mg/Kg		07/20/23 15:49	07/28/23 02:25	1
Diesel Range Organics (Over C10-C28)	**1220**		50.3		mg/Kg		07/20/23 15:49	07/28/23 02:25	1
OII Range Organics (Over C28-C36)	<50.3	U	50.3		mg/Kg		07/20/23 15:49	07/28/23 02:25	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*134*	*S1+*	*70 - 130*	*07/20/23 15:49*	*07/28/23 02:25*	*1*
o-Terphenyl	*111*		*70 - 130*	*07/20/23 15:49*	*07/28/23 02:25*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**3320**		50.3		mg/Kg			07/15/23 01:42	10

Client Sample ID: BES23-33 0.5'

Lab Sample ID: 890-4938-4
Matrix: Solid
Date Collected: 07/12/23 10:15
Date Received: 07/12/23 16:02
Sample Depth: 0.5

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		07/17/23 12:42	07/17/23 23:49	1
Ethylbenzene	<0.00202	U	0.00202		mg/Kg		07/17/23 12:42	07/17/23 23:49	1
Toluene	<0.00202	U	0.00202		mg/Kg		07/17/23 12:42	07/17/23 23:49	1
Xylenes, Total	<0.00403	U	0.00403		mg/Kg		07/17/23 12:42	07/17/23 23:49	1
m-Xylene & p-Xylene	<0.00403	U	0.00403		mg/Kg		07/17/23 12:42	07/17/23 23:49	1
o-Xylene	<0.00202	U	0.00202		mg/Kg		07/17/23 12:42	07/17/23 23:49	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*90*		*70 - 130*	*07/17/23 12:42*	*07/17/23 23:49*	*1*
1,4-Difluorobenzene (Surr)	*59*	*S1-*	*70 - 130*	*07/17/23 12:42*	*07/17/23 23:49*	*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			07/18/23 10:31	1

Method: SW846 8015 NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**120**		50.4		mg/Kg			07/28/23 11:50	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	<50.4	U *-	50.4		mg/Kg		07/20/23 15:49	07/28/23 02:46	1
Diesel Range Organics (Over C10-C28)	**120**		50.4		mg/Kg		07/20/23 15:49	07/28/23 02:46	1
OII Range Organics (Over C28-C36)	<50.4	U	50.4		mg/Kg		07/20/23 15:49	07/28/23 02:46	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*119*		*70 - 130*	*07/20/23 15:49*	*07/28/23 02:46*	*1*
o-Terphenyl	*102*		*70 - 130*	*07/20/23 15:49*	*07/28/23 02:46*	*1*

Client Sample Results

Client: Vertex
Project/Site: Corral Fly

Job ID: 890-4938-1
SDG: 23E-02502

Client Sample ID: BES23-33 0.5'

Lab Sample ID: 890-4938-4
Matrix: Solid
Date Collected: 07/12/23 10:15
Date Received: 07/12/23 16:02
Sample Depth: 0.5

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	767	F1	25.0		mg/Kg			07/15/23 01:48	5

Client Sample ID: BES23-34 0.5'

Lab Sample ID: 890-4938-5
Matrix: Solid
Date Collected: 07/12/23 10:20
Date Received: 07/12/23 16:02
Sample Depth: 0.5

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		07/17/23 12:42	07/18/23 00:10	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		07/17/23 12:42	07/18/23 00:10	1
Toluene	<0.00199	U	0.00199		mg/Kg		07/17/23 12:42	07/18/23 00:10	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		07/17/23 12:42	07/18/23 00:10	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		07/17/23 12:42	07/18/23 00:10	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		07/17/23 12:42	07/18/23 00:10	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*94*		*70 - 130*	*07/17/23 12:42*	*07/18/23 00:10*	*1*
1,4-Difluorobenzene (Surr)	*64*	*S1-*	*70 - 130*	*07/17/23 12:42*	*07/18/23 00:10*	*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			07/18/23 10:31	1

Method: SW846 8015 NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.5	U	50.5		mg/Kg			07/28/23 11:50	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	<50.5	U *-	50.5		mg/Kg		07/20/23 15:49	07/28/23 03:08	1
Diesel Range Organics (Over C10-C28)	<50.5	U	50.5		mg/Kg		07/20/23 15:49	07/28/23 03:08	1
OII Range Organics (Over C28-C36)	<50.5	U	50.5		mg/Kg		07/20/23 15:49	07/28/23 03:08	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*139*	*S1+*	*70 - 130*	*07/20/23 15:49*	*07/28/23 03:08*	*1*
o-Terphenyl	*124*		*70 - 130*	*07/20/23 15:49*	*07/28/23 03:08*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	10800		100		mg/Kg			07/15/23 02:03	20

Client Sample Results

Client: Vertex
Project/Site: Corral Fly

Job ID: 890-4938-1
SDG: 23E-02502

Client Sample ID: BES23-35 0.5'

Lab Sample ID: 890-4938-6
Matrix: Solid
Date Collected: 07/12/23 10:25
Date Received: 07/12/23 16:02
Sample Depth: 0.5

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00198	U	0.00198		mg/Kg		07/17/23 12:42	07/18/23 00:30	1
Ethylbenzene	<0.00198	U	0.00198		mg/Kg		07/17/23 12:42	07/18/23 00:30	1
Toluene	<0.00198	U	0.00198		mg/Kg		07/17/23 12:42	07/18/23 00:30	1
Xylenes, Total	<0.00396	U	0.00396		mg/Kg		07/17/23 12:42	07/18/23 00:30	1
m-Xylene & p-Xylene	<0.00396	U	0.00396		mg/Kg		07/17/23 12:42	07/18/23 00:30	1
o-Xylene	<0.00198	U	0.00198		mg/Kg		07/17/23 12:42	07/18/23 00:30	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*94*		*70 - 130*	*07/17/23 12:42*	*07/18/23 00:30*	*1*
1,4-Difluorobenzene (Surr)	*70*		*70 - 130*	*07/17/23 12:42*	*07/18/23 00:30*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00396	U	0.00396		mg/Kg			07/18/23 10:31	1

Method: SW846 8015 NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.4	U	50.4		mg/Kg			07/28/23 11:50	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	<50.4	U *-	50.4		mg/Kg		07/20/23 15:49	07/28/23 03:30	1
Diesel Range Organics (Over C10-C28)	<50.4	U	50.4		mg/Kg		07/20/23 15:49	07/28/23 03:30	1
OII Range Organics (Over C28-C36)	<50.4	U	50.4		mg/Kg		07/20/23 15:49	07/28/23 03:30	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*123*		*70 - 130*	*07/20/23 15:49*	*07/28/23 03:30*	*1*
o-Terphenyl	*108*		*70 - 130*	*07/20/23 15:49*	*07/28/23 03:30*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**9780**		99.2		mg/Kg			07/15/23 02:08	20

Client Sample ID: BES23-36 0.5'

Lab Sample ID: 890-4938-7
Matrix: Solid
Date Collected: 07/12/23 10:30
Date Received: 07/12/23 16:02
Sample Depth: 0.5

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		07/17/23 12:42	07/18/23 00:51	1
Ethylbenzene	<0.00201	U	0.00201		mg/Kg		07/17/23 12:42	07/18/23 00:51	1
Toluene	<0.00201	U	0.00201		mg/Kg		07/17/23 12:42	07/18/23 00:51	1
Xylenes, Total	<0.00402	U	0.00402		mg/Kg		07/17/23 12:42	07/18/23 00:51	1
m-Xylene & p-Xylene	<0.00402	U	0.00402		mg/Kg		07/17/23 12:42	07/18/23 00:51	1
o-Xylene	<0.00201	U	0.00201		mg/Kg		07/17/23 12:42	07/18/23 00:51	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*95*		*70 - 130*	*07/17/23 12:42*	*07/18/23 00:51*	*1*

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Client Sample Results

Client: Vertex
Project/Site: Corral Fly

Job ID: 890-4938-1
SDG: 23E-02502

Client Sample ID: BES23-36 0.5'

Lab Sample ID: 890-4938-7
Matrix: Solid
Date Collected: 07/12/23 10:30
Date Received: 07/12/23 16:02
Sample Depth: 0.5

Method: SW846 8021B - Volatile Organic Compounds (GC) (Continued)

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Difluorobenzene (Surr)	*70*		*70 - 130*	*07/17/23 12:42*	*07/18/23 00:51*	*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			07/18/23 10:31	1

Method: SW846 8015 NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**96.2**		50.0		mg/Kg			07/28/23 11:50	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		07/20/23 15:49	07/28/23 03:51	1
Diesel Range Organics (Over C10-C28)	**96.2**		50.0		mg/Kg		07/20/23 15:49	07/28/23 03:51	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		07/20/23 15:49	07/28/23 03:51	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*133*	*S1+*	*70 - 130*	*07/20/23 15:49*	*07/28/23 03:51*	*1*
o-Terphenyl	*117*		*70 - 130*	*07/20/23 15:49*	*07/28/23 03:51*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**2360**		25.1		mg/Kg			07/15/23 02:23	5

Client Sample ID: BES23-37 0.5'

Lab Sample ID: 890-4938-8
Matrix: Solid
Date Collected: 07/12/23 10:35
Date Received: 07/12/23 16:02
Sample Depth: 0.5

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		07/17/23 12:42	07/18/23 01:11	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		07/17/23 12:42	07/18/23 01:11	1
Toluene	<0.00200	U	0.00200		mg/Kg		07/17/23 12:42	07/18/23 01:11	1
Xylenes, Total	<0.00399	U	0.00399		mg/Kg		07/17/23 12:42	07/18/23 01:11	1
m-Xylene & p-Xylene	<0.00399	U	0.00399		mg/Kg		07/17/23 12:42	07/18/23 01:11	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		07/17/23 12:42	07/18/23 01:11	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*90*		*70 - 130*	*07/17/23 12:42*	*07/18/23 01:11*	*1*
1,4-Difluorobenzene (Surr)	*63*	*S1-*	*70 - 130*	*07/17/23 12:42*	*07/18/23 01:11*	*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			07/18/23 10:31	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			07/28/23 11:50	1

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Client Sample Results

Client: Vertex
Project/Site: Corral Fly

Job ID: 890-4938-1
SDG: 23E-02502

Client Sample ID: BES23-37 0.5'

Lab Sample ID: 890-4938-8
Matrix: Solid
Date Collected: 07/12/23 10:35
Date Received: 07/12/23 16:02
Sample Depth: 0.5

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		07/20/23 15:49	07/28/23 04:13	1
Diesel Range Organics (Over C10-C28)	<49.8	U	49.8		mg/Kg		07/20/23 15:49	07/28/23 04:13	1
OII Range Organics (Over C28-C36)	<49.8	U	49.8		mg/Kg		07/20/23 15:49	07/28/23 04:13	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*132*	*S1+*	*70 - 130*	*07/20/23 15:49*	*07/28/23 04:13*	*1*
o-Terphenyl	*111*		*70 - 130*	*07/20/23 15:49*	*07/28/23 04:13*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**355**		4.98		mg/Kg			07/15/23 02:29	1

Client Sample ID: BES23-38 0.5'

Lab Sample ID: 890-4938-9
Matrix: Solid
Date Collected: 07/12/23 10:40
Date Received: 07/12/23 16:02
Sample Depth: 0.5

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00198	U	0.00198		mg/Kg		07/17/23 12:42	07/18/23 01:31	1
Ethylbenzene	<0.00198	U	0.00198		mg/Kg		07/17/23 12:42	07/18/23 01:31	1
Toluene	<0.00198	U	0.00198		mg/Kg		07/17/23 12:42	07/18/23 01:31	1
Xylenes, Total	<0.00396	U	0.00396		mg/Kg		07/17/23 12:42	07/18/23 01:31	1
m-Xylene & p-Xylene	<0.00396	U	0.00396		mg/Kg		07/17/23 12:42	07/18/23 01:31	1
o-Xylene	<0.00198	U	0.00198		mg/Kg		07/17/23 12:42	07/18/23 01:31	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*91*		*70 - 130*	*07/17/23 12:42*	*07/18/23 01:31*	*1*
1,4-Difluorobenzene (Surr)	*68*	*S1-*	*70 - 130*	*07/17/23 12:42*	*07/18/23 01:31*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00396	U	0.00396		mg/Kg			07/18/23 10:31	1

Method: SW846 8015 NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**796**		49.6		mg/Kg			07/28/23 11:50	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	<49.6	U *-	49.6		mg/Kg		07/20/23 15:49	07/28/23 04:35	1
Diesel Range Organics (Over C10-C28)	**796**		49.6		mg/Kg		07/20/23 15:49	07/28/23 04:35	1
OII Range Organics (Over C28-C36)	<49.6	U	49.6		mg/Kg		07/20/23 15:49	07/28/23 04:35	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*127*		*70 - 130*	*07/20/23 15:49*	*07/28/23 04:35*	*1*
o-Terphenyl	*105*		*70 - 130*	*07/20/23 15:49*	*07/28/23 04:35*	*1*

Client Sample Results

Client: Vertex
Project/Site: Corral Fly

Job ID: 890-4938-1
SDG: 23E-02502

Client Sample ID: BES23-38 0.5'

Lab Sample ID: 890-4938-9
Matrix: Solid
Date Collected: 07/12/23 10:40
Date Received: 07/12/23 16:02
Sample Depth: 0.5

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	12300		99.8		mg/Kg			07/15/23 02:34	20

Client Sample ID: BES23-39 0.5'

Lab Sample ID: 890-4938-10
Matrix: Solid
Date Collected: 07/12/23 10:45
Date Received: 07/12/23 16:02
Sample Depth: 0.5

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		07/17/23 12:42	07/18/23 01:52	1
Ethylbenzene	<0.00201	U	0.00201		mg/Kg		07/17/23 12:42	07/18/23 01:52	1
Toluene	<0.00201	U	0.00201		mg/Kg		07/17/23 12:42	07/18/23 01:52	1
Xylenes, Total	<0.00402	U	0.00402		mg/Kg		07/17/23 12:42	07/18/23 01:52	1
m-Xylene & p-Xylene	<0.00402	U	0.00402		mg/Kg		07/17/23 12:42	07/18/23 01:52	1
o-Xylene	<0.00201	U	0.00201		mg/Kg		07/17/23 12:42	07/18/23 01:52	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*73*		*70 - 130*	*07/17/23 12:42*	*07/18/23 01:52*	*1*
1,4-Difluorobenzene (Surr)	*84*		*70 - 130*	*07/17/23 12:42*	*07/18/23 01:52*	*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			07/18/23 10:31	1

Method: SW846 8015 NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.2	U	50.2		mg/Kg			07/28/23 11:50	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	<50.2	U *-	50.2		mg/Kg		07/20/23 15:49	07/28/23 04:57	1
Diesel Range Organics (Over C10-C28)	<50.2	U	50.2		mg/Kg		07/20/23 15:49	07/28/23 04:57	1
OII Range Organics (Over C28-C36)	<50.2	U	50.2		mg/Kg		07/20/23 15:49	07/28/23 04:57	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*130*		*70 - 130*	*07/20/23 15:49*	*07/28/23 04:57*	*1*
o-Terphenyl	*114*		*70 - 130*	*07/20/23 15:49*	*07/28/23 04:57*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	1080		25.2		mg/Kg			07/15/23 02:39	5

Client Sample Results

Client: Vertex
Project/Site: Corral Fly

Job ID: 890-4938-1
SDG: 23E-02502

Client Sample ID: BES23-40 0.5'

Date Collected: 07/12/23 10:50
Date Received: 07/12/23 16:02
Sample Depth: 0.5

Lab Sample ID: 890-4938-11

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		07/17/23 12:42	07/18/23 02:12	1
Ethylbenzene	<0.00202	U	0.00202		mg/Kg		07/17/23 12:42	07/18/23 02:12	1
Toluene	<0.00202	U	0.00202		mg/Kg		07/17/23 12:42	07/18/23 02:12	1
Xylenes, Total	<0.00404	U	0.00404		mg/Kg		07/17/23 12:42	07/18/23 02:12	1
m-Xylene & p-Xylene	<0.00404	U	0.00404		mg/Kg		07/17/23 12:42	07/18/23 02:12	1
o-Xylene	<0.00202	U	0.00202		mg/Kg		07/17/23 12:42	07/18/23 02:12	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*92*		*70 - 130*	*07/17/23 12:42*	*07/18/23 02:12*	*1*
1,4-Difluorobenzene (Surr)	*68*	*S1-*	*70 - 130*	*07/17/23 12:42*	*07/18/23 02:12*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00404	U	0.00404		mg/Kg			07/18/23 10:31	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			07/28/23 11:50	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		07/20/23 15:49	07/28/23 05:19	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		07/20/23 15:49	07/28/23 05:19	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		07/20/23 15:49	07/28/23 05:19	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*123*		*70 - 130*	*07/20/23 15:49*	*07/28/23 05:19*	*1*
o-Terphenyl	*108*		*70 - 130*	*07/20/23 15:49*	*07/28/23 05:19*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**2740**		25.0		mg/Kg			07/15/23 02:44	5

Surrogate Summary

Client: Vertex
Project/Site: Corral Fly

Job ID: 890-4938-1
SDG: 23E-02502

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)
890-4929-A-4-B MS	Matrix Spike	272 S1+	76
890-4929-A-4-C MSD	Matrix Spike Duplicate	218 S1+	70
890-4938-1	BES23-30 0.5'	250 S1+	102
890-4938-2	BES23-31 0.5'	88	76
890-4938-2 MS	BES23-31 0.5'	127	97
890-4938-2 MSD	BES23-31 0.5'	121	94
890-4938-3	BES23-32 0.5'	92	68 S1-
890-4938-4	BES23-33 0.5'	90	59 S1-
890-4938-5	BES23-34 0.5'	94	64 S1-
890-4938-6	BES23-35 0.5'	94	70
890-4938-7	BES23-36 0.5'	95	70
890-4938-8	BES23-37 0.5'	90	63 S1-
890-4938-9	BES23-38 0.5'	91	68 S1-
890-4938-10	BES23-39 0.5'	73	84
890-4938-11	BES23-40 0.5'	92	68 S1-
LCS 880-57703/1-A	Lab Control Sample	213 S1+	85
LCS 880-57839/1-A	Lab Control Sample	120	100
LCSD 880-57703/2-A	Lab Control Sample Dup	223 S1+	63 S1-
LCSD 880-57839/2-A	Lab Control Sample Dup	120	94
MB 880-57655/5-A	Method Blank	115	60 S1-
MB 880-57703/5-A	Method Blank	122	81
MB 880-57823/5-A	Method Blank	71	90
MB 880-57839/5-A	Method Blank	76	84

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)
890-4932-A-1-D MS	Matrix Spike	134 S1+	105
890-4932-A-1-E MSD	Matrix Spike Duplicate	131 S1+	99
890-4938-1	BES23-30 0.5'	147 S1+	131 S1+
890-4938-2	BES23-31 0.5'	121	107
890-4938-3	BES23-32 0.5'	134 S1+	111
890-4938-4	BES23-33 0.5'	119	102
890-4938-5	BES23-34 0.5'	139 S1+	124
890-4938-6	BES23-35 0.5'	123	108
890-4938-7	BES23-36 0.5'	133 S1+	117
890-4938-8	BES23-37 0.5'	132 S1+	111
890-4938-9	BES23-38 0.5'	127	105
890-4938-10	BES23-39 0.5'	130	114
890-4938-11	BES23-40 0.5'	123	108
LCS 880-58171/2-A	Lab Control Sample	104	98
LCSD 880-58171/3-A	Lab Control Sample Dup	102	93
MB 880-58171/1-A	Method Blank	171 S1+	156 S1+

Surrogate Summary

Client: Vertex
Project/Site: Corral Fly

Job ID: 890-4938-1
SDG: 23E-02502

Surrogate Legend

1CO = 1-Chlorooctane
OTPH = o-Terphenyl

QC Sample Results

Client: Vertex
Project/Site: Corral Fly

Job ID: 890-4938-1
SDG: 23E-02502

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-57655/5-A
Matrix: Solid
Analysis Batch: 57701

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 57655

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		07/14/23 08:26	07/15/23 21:24	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		07/14/23 08:26	07/15/23 21:24	1
Toluene	<0.00200	U	0.00200		mg/Kg		07/14/23 08:26	07/15/23 21:24	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		07/14/23 08:26	07/15/23 21:24	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		07/14/23 08:26	07/15/23 21:24	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		07/14/23 08:26	07/15/23 21:24	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*115*		*70 - 130*	*07/14/23 08:26*	*07/15/23 21:24*	*1*
1,4-Difluorobenzene (Surr)	*60*	*S1-*	*70 - 130*	*07/14/23 08:26*	*07/15/23 21:24*	*1*

Lab Sample ID: MB 880-57703/5-A
Matrix: Solid
Analysis Batch: 57701

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 57703

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		07/14/23 14:30	07/16/23 10:45	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		07/14/23 14:30	07/16/23 10:45	1
Toluene	<0.00200	U	0.00200		mg/Kg		07/14/23 14:30	07/16/23 10:45	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		07/14/23 14:30	07/16/23 10:45	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		07/14/23 14:30	07/16/23 10:45	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		07/14/23 14:30	07/16/23 10:45	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*122*		*70 - 130*	*07/14/23 14:30*	*07/16/23 10:45*	*1*
1,4-Difluorobenzene (Surr)	*81*		*70 - 130*	*07/14/23 14:30*	*07/16/23 10:45*	*1*

Lab Sample ID: LCS 880-57703/1-A
Matrix: Solid
Analysis Batch: 57701

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 57703

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene			0.100	0.1186		mg/Kg		119	70 - 130		
Ethylbenzene			0.100	0.1137		mg/Kg		114	70 - 130		
Toluene			0.100	0.1144		mg/Kg		114	70 - 130		
m-Xylene & p-Xylene			0.200	0.2109		mg/Kg		105	70 - 130		
o-Xylene			0.100	0.1174		mg/Kg		117	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*213*	*S1+*	*70 - 130*
1,4-Difluorobenzene (Surr)	*85*		*70 - 130*

Lab Sample ID: LCSD 880-57703/2-A
Matrix: Solid
Analysis Batch: 57701

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 57703

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene			0.100	0.1148		mg/Kg		115	70 - 130	3	35

QC Sample Results

Client: Vertex
Project/Site: Corral Fly

Job ID: 890-4938-1
SDG: 23E-02502

Method: 8021B - Volatile Organic Compounds (GC) (Continued)

Lab Sample ID: LCSD 880-57703/2-A
Matrix: Solid
Analysis Batch: 57701

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 57703

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Ethylbenzene			0.100	0.1291		mg/Kg		129	70 - 130	13	35
Toluene			0.100	0.1217		mg/Kg		122	70 - 130	6	35
m-Xylene & p-Xylene			0.200	0.2349		mg/Kg		117	70 - 130	11	35
o-Xylene			0.100	0.1225		mg/Kg		123	70 - 130	4	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*223*	*S1+*	*70 - 130*
1,4-Difluorobenzene (Surr)	*63*	*S1-*	*70 - 130*

Lab Sample ID: 890-4929-A-4-B MS
Matrix: Solid
Analysis Batch: 57701

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 57703

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	<0.00202	U	0.0994	0.1077		mg/Kg		108	70 - 130
Ethylbenzene	<0.00202	U F2 F1	0.0994	0.04676	F1	mg/Kg		47	70 - 130
Toluene	<0.00202	U F2 F1	0.0994	0.07130		mg/Kg		72	70 - 130
m-Xylene & p-Xylene	<0.00404	U F2 F1	0.199	0.08711	F1	mg/Kg		44	70 - 130
o-Xylene	<0.00202	U F1	0.0994	0.06021	F1	mg/Kg		61	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*272*	*S1+*	*70 - 130*
1,4-Difluorobenzene (Surr)	*76*		*70 - 130*

Lab Sample ID: 890-4929-A-4-C MSD
Matrix: Solid
Analysis Batch: 57701

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 57703

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	<0.00202	U	0.0998	0.07531		mg/Kg		75	70 - 130	35	35
Ethylbenzene	<0.00202	U F2 F1	0.0998	0.03174	F2 F1	mg/Kg		32	70 - 130	38	35
Toluene	<0.00202	U F2 F1	0.0998	0.04510	F2 F1	mg/Kg		45	70 - 130	45	35
m-Xylene & p-Xylene	<0.00404	U F2 F1	0.200	0.05493	F2 F1	mg/Kg		28	70 - 130	45	35
o-Xylene	<0.00202	U F1	0.0998	0.04349	F1	mg/Kg		44	70 - 130	32	35

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*218*	*S1+*	*70 - 130*
1,4-Difluorobenzene (Surr)	*70*		*70 - 130*

Lab Sample ID: MB 880-57823/5-A
Matrix: Solid
Analysis Batch: 57772

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 57823

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		07/17/23 08:40	07/17/23 11:31	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		07/17/23 08:40	07/17/23 11:31	1
Toluene	<0.00200	U	0.00200		mg/Kg		07/17/23 08:40	07/17/23 11:31	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		07/17/23 08:40	07/17/23 11:31	1

QC Sample Results

Client: Vertex
Project/Site: Corral Fly

Job ID: 890-4938-1
SDG: 23E-02502

Method: 8021B - Volatile Organic Compounds (GC) (Continued)

Lab Sample ID: MB 880-57823/5-A
Matrix: Solid
Analysis Batch: 57772

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 57823

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		07/17/23 08:40	07/17/23 11:31	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		07/17/23 08:40	07/17/23 11:31	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*71*		*70 - 130*	*07/17/23 08:40*	*07/17/23 11:31*	*1*
1,4-Difluorobenzene (Surr)	*90*		*70 - 130*	*07/17/23 08:40*	*07/17/23 11:31*	*1*

Lab Sample ID: MB 880-57839/5-A
Matrix: Solid
Analysis Batch: 57772

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 57839

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		07/17/23 12:42	07/17/23 22:47	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		07/17/23 12:42	07/17/23 22:47	1
Toluene	<0.00200	U	0.00200		mg/Kg		07/17/23 12:42	07/17/23 22:47	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		07/17/23 12:42	07/17/23 22:47	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		07/17/23 12:42	07/17/23 22:47	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		07/17/23 12:42	07/17/23 22:47	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*76*		*70 - 130*	*07/17/23 12:42*	*07/17/23 22:47*	*1*
1,4-Difluorobenzene (Surr)	*84*		*70 - 130*	*07/17/23 12:42*	*07/17/23 22:47*	*1*

Lab Sample ID: LCS 880-57839/1-A
Matrix: Solid
Analysis Batch: 57772

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 57839

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	0.100	0.1058		mg/Kg		106	70 - 130
Ethylbenzene	0.100	0.1194		mg/Kg		119	70 - 130
Toluene	0.100	0.09907		mg/Kg		99	70 - 130
m-Xylene & p-Xylene	0.200	0.2456		mg/Kg		123	70 - 130
o-Xylene	0.100	0.1285		mg/Kg		129	70 - 130

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*120*		*70 - 130*
1,4-Difluorobenzene (Surr)	*100*		*70 - 130*

Lab Sample ID: LCSD 880-57839/2-A
Matrix: Solid
Analysis Batch: 57772

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 57839

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	0.100	0.08681		mg/Kg		87	70 - 130	20	35
Ethylbenzene	0.100	0.1026		mg/Kg		103	70 - 130	15	35
Toluene	0.100	0.08343		mg/Kg		83	70 - 130	17	35
m-Xylene & p-Xylene	0.200	0.2130		mg/Kg		106	70 - 130	14	35
o-Xylene	0.100	0.1117		mg/Kg		112	70 - 130	14	35

QC Sample Results

Client: Vertex
Project/Site: Corral Fly

Job ID: 890-4938-1
SDG: 23E-02502

Method: 8021B - Volatile Organic Compounds (GC) (Continued)

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
4-Bromofluorobenzene (Surr)	120		70 - 130
1,4-Difluorobenzene (Surr)	94		70 - 130

Lab Sample ID: 890-4938-2 MS — **Client Sample ID: BES23-31 0.5'**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 57772 — **Prep Batch: 57839**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	<0.00199	U	0.0994	0.1057		mg/Kg		106	70 - 130
Ethylbenzene	<0.00199	U	0.0994	0.1224		mg/Kg		123	70 - 130
Toluene	<0.00199	U	0.0994	0.09839		mg/Kg		99	70 - 130
m-Xylene & p-Xylene	<0.00398	U	0.199	0.2544		mg/Kg		128	70 - 130
o-Xylene	<0.00199	U	0.0994	0.1287		mg/Kg		129	70 - 130

Surrogate	MS %Recovery	MS Qualifier	Limits
4-Bromofluorobenzene (Surr)	127		70 - 130
1,4-Difluorobenzene (Surr)	97		70 - 130

Lab Sample ID: 890-4938-2 MSD — **Client Sample ID: BES23-31 0.5'**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 57772 — **Prep Batch: 57839**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	<0.00199	U	0.0998	0.1085		mg/Kg		109	70 - 130	3	35
Ethylbenzene	<0.00199	U	0.0998	0.1237		mg/Kg		124	70 - 130	1	35
Toluene	<0.00199	U	0.0998	0.1002		mg/Kg		100	70 - 130	2	35
m-Xylene & p-Xylene	<0.00398	U	0.200	0.2575		mg/Kg		129	70 - 130	1	35
o-Xylene	<0.00199	U	0.0998	0.1285		mg/Kg		129	70 - 130	0	35

Surrogate	MSD %Recovery	MSD Qualifier	Limits
4-Bromofluorobenzene (Surr)	121		70 - 130
1,4-Difluorobenzene (Surr)	94		70 - 130

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

Lab Sample ID: MB 880-58171/1-A — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 58603 — **Prep Batch: 58171**

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		07/20/23 15:48	07/27/23 20:13	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		07/20/23 15:48	07/27/23 20:13	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		07/20/23 15:48	07/27/23 20:13	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	171	S1+	70 - 130	07/20/23 15:48	07/27/23 20:13	1
o-Terphenyl	156	S1+	70 - 130	07/20/23 15:48	07/27/23 20:13	1

QC Sample Results

Client: Vertex
Project/Site: Corral Fly

Job ID: 890-4938-1
SDG: 23E-02502

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

Lab Sample ID: LCS 880-58171/2-A
Matrix: Solid
Analysis Batch: 58603

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 58171

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Gasoline Range Organics (GRO)-C6-C10			1000	592.9	*-	mg/Kg		59	70 - 130		
Diesel Range Organics (Over C10-C28)			1000	936.9		mg/Kg		94	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1-Chlorooctane	*104*		*70 - 130*
o-Terphenyl	*98*		*70 - 130*

Lab Sample ID: LCSD 880-58171/3-A
Matrix: Solid
Analysis Batch: 58603

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 58171

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			1000	614.6	*-	mg/Kg		61	70 - 130	4	20
Diesel Range Organics (Over C10-C28)			1000	971.0		mg/Kg		97	70 - 130	4	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1-Chlorooctane	*102*		*70 - 130*
o-Terphenyl	*93*		*70 - 130*

Lab Sample ID: 890-4932-A-1-D MS
Matrix: Solid
Analysis Batch: 58603

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 58171

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Gasoline Range Organics (GRO)-C6-C10	<50.3	U *-	992	1037		mg/Kg		103	70 - 130		
Diesel Range Organics (Over C10-C28)	53.1		992	1270		mg/Kg		123	70 - 130		

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
1-Chlorooctane	*134*	*S1+*	*70 - 130*
o-Terphenyl	*105*		*70 - 130*

Lab Sample ID: 890-4932-A-1-E MSD
Matrix: Solid
Analysis Batch: 58603

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 58171

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	<50.3	U *-	992	991.4		mg/Kg		98	70 - 130	4	20
Diesel Range Organics (Over C10-C28)	53.1		992	1223		mg/Kg		118	70 - 130	4	20

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
1-Chlorooctane	*131*	*S1+*	*70 - 130*

QC Sample Results

Client: Vertex
Project/Site: Corral Fly

Job ID: 890-4938-1
SDG: 23E-02502

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

Lab Sample ID: 890-4932-A-1-E MSD
Matrix: Solid
Analysis Batch: 58603

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 58171

Surrogate	MSD %Recovery	MSD Qualifier	Limits
o-Terphenyl	*99*		*70 - 130*

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-57699/1-A
Matrix: Solid
Analysis Batch: 57705

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			07/15/23 00:20	1

Lab Sample ID: LCS 880-57699/2-A
Matrix: Solid
Analysis Batch: 57705

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride			250	252.8		mg/Kg		101	90 - 110		

Lab Sample ID: LCSD 880-57699/3-A
Matrix: Solid
Analysis Batch: 57705

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	254.4		mg/Kg		102	90 - 110	1	20

Lab Sample ID: 890-4938-4 MS
Matrix: Solid
Analysis Batch: 57705

Client Sample ID: BES23-33 0.5'
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride	767	F1	1250	2201	F1	mg/Kg		115	90 - 110		

Lab Sample ID: 890-4938-4 MSD
Matrix: Solid
Analysis Batch: 57705

Client Sample ID: BES23-33 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	767	F1	1250	2198	F1	mg/Kg		114	90 - 110	0	20

QC Association Summary

Client: Vertex
Project/Site: Corral Fly

Job ID: 890-4938-1
SDG: 23E-02502

GC VOA

Prep Batch: 57655

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-57655/5-A	Method Blank	Total/NA	Solid	5035	

Analysis Batch: 57701

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4938-1	BES23-30 0.5'	Total/NA	Solid	8021B	57703
MB 880-57655/5-A	Method Blank	Total/NA	Solid	8021B	57655
MB 880-57703/5-A	Method Blank	Total/NA	Solid	8021B	57703
LCS 880-57703/1-A	Lab Control Sample	Total/NA	Solid	8021B	57703
LCSD 880-57703/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	57703
890-4929-A-4-B MS	Matrix Spike	Total/NA	Solid	8021B	57703
890-4929-A-4-C MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	57703

Prep Batch: 57703

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4938-1	BES23-30 0.5'	Total/NA	Solid	5035	
MB 880-57703/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-57703/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-57703/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
890-4929-A-4-B MS	Matrix Spike	Total/NA	Solid	5035	
890-4929-A-4-C MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Analysis Batch: 57772

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4938-2	BES23-31 0.5'	Total/NA	Solid	8021B	57839
890-4938-3	BES23-32 0.5'	Total/NA	Solid	8021B	57839
890-4938-4	BES23-33 0.5'	Total/NA	Solid	8021B	57839
890-4938-5	BES23-34 0.5'	Total/NA	Solid	8021B	57839
890-4938-6	BES23-35 0.5'	Total/NA	Solid	8021B	57839
890-4938-7	BES23-36 0.5'	Total/NA	Solid	8021B	57839
890-4938-8	BES23-37 0.5'	Total/NA	Solid	8021B	57839
890-4938-9	BES23-38 0.5'	Total/NA	Solid	8021B	57839
890-4938-10	BES23-39 0.5'	Total/NA	Solid	8021B	57839
890-4938-11	BES23-40 0.5'	Total/NA	Solid	8021B	57839
MB 880-57823/5-A	Method Blank	Total/NA	Solid	8021B	57823
MB 880-57839/5-A	Method Blank	Total/NA	Solid	8021B	57839
LCS 880-57839/1-A	Lab Control Sample	Total/NA	Solid	8021B	57839
LCSD 880-57839/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	57839
890-4938-2 MS	BES23-31 0.5'	Total/NA	Solid	8021B	57839
890-4938-2 MSD	BES23-31 0.5'	Total/NA	Solid	8021B	57839

Prep Batch: 57823

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-57823/5-A	Method Blank	Total/NA	Solid	5035	

Prep Batch: 57839

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4938-2	BES23-31 0.5'	Total/NA	Solid	5035	
890-4938-3	BES23-32 0.5'	Total/NA	Solid	5035	
890-4938-4	BES23-33 0.5'	Total/NA	Solid	5035	
890-4938-5	BES23-34 0.5'	Total/NA	Solid	5035	
890-4938-6	BES23-35 0.5'	Total/NA	Solid	5035	

QC Association Summary

Client: Vertex
Project/Site: Corral Fly

Job ID: 890-4938-1
SDG: 23E-02502

GC VOA (Continued)

Prep Batch: 57839 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4938-7	BES23-36 0.5'	Total/NA	Solid	5035	
890-4938-8	BES23-37 0.5'	Total/NA	Solid	5035	
890-4938-9	BES23-38 0.5'	Total/NA	Solid	5035	
890-4938-10	BES23-39 0.5'	Total/NA	Solid	5035	
890-4938-11	BES23-40 0.5'	Total/NA	Solid	5035	
MB 880-57839/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-57839/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-57839/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
890-4938-2 MS	BES23-31 0.5'	Total/NA	Solid	5035	
890-4938-2 MSD	BES23-31 0.5'	Total/NA	Solid	5035	

Analysis Batch: 57868

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4938-1	BES23-30 0.5'	Total/NA	Solid	Total BTEX	
890-4938-2	BES23-31 0.5'	Total/NA	Solid	Total BTEX	
890-4938-3	BES23-32 0.5'	Total/NA	Solid	Total BTEX	
890-4938-4	BES23-33 0.5'	Total/NA	Solid	Total BTEX	
890-4938-5	BES23-34 0.5'	Total/NA	Solid	Total BTEX	
890-4938-6	BES23-35 0.5'	Total/NA	Solid	Total BTEX	
890-4938-7	BES23-36 0.5'	Total/NA	Solid	Total BTEX	
890-4938-8	BES23-37 0.5'	Total/NA	Solid	Total BTEX	
890-4938-9	BES23-38 0.5'	Total/NA	Solid	Total BTEX	
890-4938-10	BES23-39 0.5'	Total/NA	Solid	Total BTEX	
890-4938-11	BES23-40 0.5'	Total/NA	Solid	Total BTEX	

GC Semi VOA

Prep Batch: 58171

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4938-1	BES23-30 0.5'	Total/NA	Solid	8015NM Prep	
890-4938-2	BES23-31 0.5'	Total/NA	Solid	8015NM Prep	
890-4938-3	BES23-32 0.5'	Total/NA	Solid	8015NM Prep	
890-4938-4	BES23-33 0.5'	Total/NA	Solid	8015NM Prep	
890-4938-5	BES23-34 0.5'	Total/NA	Solid	8015NM Prep	
890-4938-6	BES23-35 0.5'	Total/NA	Solid	8015NM Prep	
890-4938-7	BES23-36 0.5'	Total/NA	Solid	8015NM Prep	
890-4938-8	BES23-37 0.5'	Total/NA	Solid	8015NM Prep	
890-4938-9	BES23-38 0.5'	Total/NA	Solid	8015NM Prep	
890-4938-10	BES23-39 0.5'	Total/NA	Solid	8015NM Prep	
890-4938-11	BES23-40 0.5'	Total/NA	Solid	8015NM Prep	
MB 880-58171/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-58171/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-58171/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-4932-A-1-D MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
890-4932-A-1-E MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

Analysis Batch: 58603

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4938-1	BES23-30 0.5'	Total/NA	Solid	8015B NM	58171
890-4938-2	BES23-31 0.5'	Total/NA	Solid	8015B NM	58171
890-4938-3	BES23-32 0.5'	Total/NA	Solid	8015B NM	58171

QC Association Summary

Client: Vertex
Project/Site: Corral Fly

Job ID: 890-4938-1
SDG: 23E-02502

GC Semi VOA (Continued)

Analysis Batch: 58603 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4938-4	BES23-33 0.5'	Total/NA	Solid	8015B NM	58171
890-4938-5	BES23-34 0.5'	Total/NA	Solid	8015B NM	58171
890-4938-6	BES23-35 0.5'	Total/NA	Solid	8015B NM	58171
890-4938-7	BES23-36 0.5'	Total/NA	Solid	8015B NM	58171
890-4938-8	BES23-37 0.5'	Total/NA	Solid	8015B NM	58171
890-4938-9	BES23-38 0.5'	Total/NA	Solid	8015B NM	58171
890-4938-10	BES23-39 0.5'	Total/NA	Solid	8015B NM	58171
890-4938-11	BES23-40 0.5'	Total/NA	Solid	8015B NM	58171
MB 880-58171/1-A	Method Blank	Total/NA	Solid	8015B NM	58171
LCS 880-58171/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	58171
LCSD 880-58171/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	58171
890-4932-A-1-D MS	Matrix Spike	Total/NA	Solid	8015B NM	58171
890-4932-A-1-E MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	58171

Analysis Batch: 58722

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4938-1	BES23-30 0.5'	Total/NA	Solid	8015 NM	
890-4938-2	BES23-31 0.5'	Total/NA	Solid	8015 NM	
890-4938-3	BES23-32 0.5'	Total/NA	Solid	8015 NM	
890-4938-4	BES23-33 0.5'	Total/NA	Solid	8015 NM	
890-4938-5	BES23-34 0.5'	Total/NA	Solid	8015 NM	
890-4938-6	BES23-35 0.5'	Total/NA	Solid	8015 NM	
890-4938-7	BES23-36 0.5'	Total/NA	Solid	8015 NM	
890-4938-8	BES23-37 0.5'	Total/NA	Solid	8015 NM	
890-4938-9	BES23-38 0.5'	Total/NA	Solid	8015 NM	
890-4938-10	BES23-39 0.5'	Total/NA	Solid	8015 NM	
890-4938-11	BES23-40 0.5'	Total/NA	Solid	8015 NM	

HPLC/IC

Leach Batch: 57699

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4938-1	BES23-30 0.5'	Soluble	Solid	DI Leach	
890-4938-2	BES23-31 0.5'	Soluble	Solid	DI Leach	
890-4938-3	BES23-32 0.5'	Soluble	Solid	DI Leach	
890-4938-4	BES23-33 0.5'	Soluble	Solid	DI Leach	
890-4938-5	BES23-34 0.5'	Soluble	Solid	DI Leach	
890-4938-6	BES23-35 0.5'	Soluble	Solid	DI Leach	
890-4938-7	BES23-36 0.5'	Soluble	Solid	DI Leach	
890-4938-8	BES23-37 0.5'	Soluble	Solid	DI Leach	
890-4938-9	BES23-38 0.5'	Soluble	Solid	DI Leach	
890-4938-10	BES23-39 0.5'	Soluble	Solid	DI Leach	
890-4938-11	BES23-40 0.5'	Soluble	Solid	DI Leach	
MB 880-57699/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-57699/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-57699/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-4938-4 MS	BES23-33 0.5'	Soluble	Solid	DI Leach	
890-4938-4 MSD	BES23-33 0.5'	Soluble	Solid	DI Leach	

QC Association Summary

Client: Vertex
Project/Site: Corral Fly

Job ID: 890-4938-1
SDG: 23E-02502

HPLC/IC

Analysis Batch: 57705

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4938-1	BES23-30 0.5'	Soluble	Solid	300.0	57699
890-4938-2	BES23-31 0.5'	Soluble	Solid	300.0	57699
890-4938-3	BES23-32 0.5'	Soluble	Solid	300.0	57699
890-4938-4	BES23-33 0.5'	Soluble	Solid	300.0	57699
890-4938-5	BES23-34 0.5'	Soluble	Solid	300.0	57699
890-4938-6	BES23-35 0.5'	Soluble	Solid	300.0	57699
890-4938-7	BES23-36 0.5'	Soluble	Solid	300.0	57699
890-4938-8	BES23-37 0.5'	Soluble	Solid	300.0	57699
890-4938-9	BES23-38 0.5'	Soluble	Solid	300.0	57699
890-4938-10	BES23-39 0.5'	Soluble	Solid	300.0	57699
890-4938-11	BES23-40 0.5'	Soluble	Solid	300.0	57699
MB 880-57699/1-A	Method Blank	Soluble	Solid	300.0	57699
LCS 880-57699/2-A	Lab Control Sample	Soluble	Solid	300.0	57699
LCSD 880-57699/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	57699
890-4938-4 MS	BES23-33 0.5'	Soluble	Solid	300.0	57699
890-4938-4 MSD	BES23-33 0.5'	Soluble	Solid	300.0	57699

Lab Chronicle

Client: Vertex
Project/Site: Corral Fly

Job ID: 890-4938-1
SDG: 23E-02502

Client Sample ID: BES23-30 0.5'

Lab Sample ID: 890-4938-1
Matrix: Solid
Date Collected: 07/12/23 10:00
Date Received: 07/12/23 16:02

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	57703	07/14/23 14:30	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	57701	07/16/23 14:35	AJ	EET MID
Total/NA	Analysis	Total BTEX		1			57868	07/17/23 14:47	AJ	EET MID
Total/NA	Analysis	8015 NM		1			58722	07/28/23 11:50	AJ	EET MID
Total/NA	Prep	8015NM Prep			10.08 g	10 mL	58171	07/20/23 15:49	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	58603	07/28/23 01:19	AJ	EET MID
Soluble	Leach	DI Leach			4.99 g	50 mL	57699	07/14/23 13:15	KS	EET MID
Soluble	Analysis	300.0		10			57705	07/15/23 01:32	CH	EET MID

Client Sample ID: BES23-31 0.5'

Lab Sample ID: 890-4938-2
Matrix: Solid
Date Collected: 07/12/23 10:05
Date Received: 07/12/23 16:02

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	57839	07/17/23 12:42	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	57772	07/17/23 23:09	SM	EET MID
Total/NA	Analysis	Total BTEX		1			57868	07/18/23 10:31	AJ	EET MID
Total/NA	Analysis	8015 NM		1			58722	07/28/23 11:50	AJ	EET MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	58171	07/20/23 15:49	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	58603	07/28/23 02:03	AJ	EET MID
Soluble	Leach	DI Leach			5.01 g	50 mL	57699	07/14/23 13:15	KS	EET MID
Soluble	Analysis	300.0		1			57705	07/15/23 01:37	CH	EET MID

Client Sample ID: BES23-32 0.5'

Lab Sample ID: 890-4938-3
Matrix: Solid
Date Collected: 07/12/23 10:10
Date Received: 07/12/23 16:02

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	57839	07/17/23 12:42	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	57772	07/17/23 23:29	SM	EET MID
Total/NA	Analysis	Total BTEX		1			57868	07/18/23 10:31	AJ	EET MID
Total/NA	Analysis	8015 NM		1			58722	07/28/23 11:50	AJ	EET MID
Total/NA	Prep	8015NM Prep			9.94 g	10 mL	58171	07/20/23 15:49	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	58603	07/28/23 02:25	AJ	EET MID
Soluble	Leach	DI Leach			4.97 g	50 mL	57699	07/14/23 13:15	KS	EET MID
Soluble	Analysis	300.0		10			57705	07/15/23 01:42	CH	EET MID

Client Sample ID: BES23-33 0.5'

Lab Sample ID: 890-4938-4
Matrix: Solid
Date Collected: 07/12/23 10:15
Date Received: 07/12/23 16:02

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	57839	07/17/23 12:42	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	57772	07/17/23 23:49	SM	EET MID
Total/NA	Analysis	Total BTEX		1			57868	07/18/23 10:31	AJ	EET MID

Eurofins Carlsbad

Lab Chronicle

Client: Vertex
Project/Site: Corral Fly

Job ID: 890-4938-1
SDG: 23E-02502

Client Sample ID: BES23-33 0.5'

Lab Sample ID: 890-4938-4
Matrix: Solid
Date Collected: 07/12/23 10:15
Date Received: 07/12/23 16:02

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			58722	07/28/23 11:50	AJ	EET MID
Total/NA	Prep	8015NM Prep			9.93 g	10 mL	58171	07/20/23 15:49	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	58603	07/28/23 02:46	AJ	EET MID
Soluble	Leach	DI Leach			5 g	50 mL	57699	07/14/23 13:15	KS	EET MID
Soluble	Analysis	300.0		5			57705	07/15/23 01:48	CH	EET MID

Client Sample ID: BES23-34 0.5'

Lab Sample ID: 890-4938-5
Matrix: Solid
Date Collected: 07/12/23 10:20
Date Received: 07/12/23 16:02

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	57839	07/17/23 12:42	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	57772	07/18/23 00:10	SM	EET MID
Total/NA	Analysis	Total BTEX		1			57868	07/18/23 10:31	AJ	EET MID
Total/NA	Analysis	8015 NM		1			58722	07/28/23 11:50	AJ	EET MID
Total/NA	Prep	8015NM Prep			9.90 g	10 mL	58171	07/20/23 15:49	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	58603	07/28/23 03:08	AJ	EET MID
Soluble	Leach	DI Leach			4.99 g	50 mL	57699	07/14/23 13:15	KS	EET MID
Soluble	Analysis	300.0		20			57705	07/15/23 02:03	CH	EET MID

Client Sample ID: BES23-35 0.5'

Lab Sample ID: 890-4938-6
Matrix: Solid
Date Collected: 07/12/23 10:25
Date Received: 07/12/23 16:02

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	57839	07/17/23 12:42	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	57772	07/18/23 00:30	SM	EET MID
Total/NA	Analysis	Total BTEX		1			57868	07/18/23 10:31	AJ	EET MID
Total/NA	Analysis	8015 NM		1			58722	07/28/23 11:50	AJ	EET MID
Total/NA	Prep	8015NM Prep			9.92 g	10 mL	58171	07/20/23 15:49	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	58603	07/28/23 03:30	AJ	EET MID
Soluble	Leach	DI Leach			5.04 g	50 mL	57699	07/14/23 13:15	KS	EET MID
Soluble	Analysis	300.0		20			57705	07/15/23 02:08	CH	EET MID

Client Sample ID: BES23-36 0.5'

Lab Sample ID: 890-4938-7
Matrix: Solid
Date Collected: 07/12/23 10:30
Date Received: 07/12/23 16:02

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	57839	07/17/23 12:42	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	57772	07/18/23 00:51	SM	EET MID
Total/NA	Analysis	Total BTEX		1			57868	07/18/23 10:31	AJ	EET MID
Total/NA	Analysis	8015 NM		1			58722	07/28/23 11:50	AJ	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	58171	07/20/23 15:49	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	58603	07/28/23 03:51	AJ	EET MID

Eurofins Carlsbad

Lab Chronicle

Client: Vertex
Project/Site: Corral Fly

Job ID: 890-4938-1
SDG: 23E-02502

Client Sample ID: BES23-36 0.5'

Lab Sample ID: 890-4938-7
Matrix: Solid
Date Collected: 07/12/23 10:30
Date Received: 07/12/23 16:02

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Soluble	Leach	DI Leach			4.98 g	50 mL	57699	07/14/23 13:15	KS	EET MID
Soluble	Analysis	300.0		5			57705	07/15/23 02:23	CH	EET MID

Client Sample ID: BES23-37 0.5'

Lab Sample ID: 890-4938-8
Matrix: Solid
Date Collected: 07/12/23 10:35
Date Received: 07/12/23 16:02

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	57839	07/17/23 12:42	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	57772	07/18/23 01:11	SM	EET MID
Total/NA	Analysis	Total BTEX		1			57868	07/18/23 10:31	AJ	EET MID
Total/NA	Analysis	8015 NM		1			58722	07/28/23 11:50	AJ	EET MID
Total/NA	Prep	8015NM Prep			10.04 g	10 mL	58171	07/20/23 15:49	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	58603	07/28/23 04:13	AJ	EET MID
Soluble	Leach	DI Leach			5.02 g	50 mL	57699	07/14/23 13:15	KS	EET MID
Soluble	Analysis	300.0		1			57705	07/15/23 02:29	CH	EET MID

Client Sample ID: BES23-38 0.5'

Lab Sample ID: 890-4938-9
Matrix: Solid
Date Collected: 07/12/23 10:40
Date Received: 07/12/23 16:02

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	57839	07/17/23 12:42	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	57772	07/18/23 01:31	SM	EET MID
Total/NA	Analysis	Total BTEX		1			57868	07/18/23 10:31	AJ	EET MID
Total/NA	Analysis	8015 NM		1			58722	07/28/23 11:50	AJ	EET MID
Total/NA	Prep	8015NM Prep			10.08 g	10 mL	58171	07/20/23 15:49	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	58603	07/28/23 04:35	AJ	EET MID
Soluble	Leach	DI Leach			5.01 g	50 mL	57699	07/14/23 13:15	KS	EET MID
Soluble	Analysis	300.0		20			57705	07/15/23 02:34	CH	EET MID

Client Sample ID: BES23-39 0.5'

Lab Sample ID: 890-4938-10
Matrix: Solid
Date Collected: 07/12/23 10:45
Date Received: 07/12/23 16:02

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	57839	07/17/23 12:42	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	57772	07/18/23 01:52	SM	EET MID
Total/NA	Analysis	Total BTEX		1			57868	07/18/23 10:31	AJ	EET MID
Total/NA	Analysis	8015 NM		1			58722	07/28/23 11:50	AJ	EET MID
Total/NA	Prep	8015NM Prep			9.97 g	10 mL	58171	07/20/23 15:49	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	58603	07/28/23 04:57	AJ	EET MID
Soluble	Leach	DI Leach			4.97 g	50 mL	57699	07/14/23 13:15	KS	EET MID
Soluble	Analysis	300.0		5			57705	07/15/23 02:39	CH	EET MID

Lab Chronicle

Client: Vertex
Project/Site: Corral Fly

Job ID: 890-4938-1
SDG: 23E-02502

Client Sample ID: BES23-40 0.5'

Date Collected: 07/12/23 10:50
Date Received: 07/12/23 16:02

Lab Sample ID: 890-4938-11

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	5035			4.95 g	5 mL	57839	07/17/23 12:42	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	57772	07/18/23 02:12	SM	EET MID
Total/NA	Analysis	Total BTEX		1			57868	07/18/23 10:31	AJ	EET MID
Total/NA	Analysis	8015 NM		1			58722	07/28/23 11:50	AJ	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	58171	07/20/23 15:49	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	58603	07/28/23 05:19	AJ	EET MID
Soluble	Leach	DI Leach			5 g	50 mL	57699	07/14/23 13:15	KS	EET MID
Soluble	Analysis	300.0		5			57705	07/15/23 02:44	CH	EET MID

Laboratory References:

EET MID = Eurofins Midland, 1211 W. Florida Ave, Midland, TX 79701, TEL (432)704-5440

Accreditation/Certification Summary

Client: Vertex
Project/Site: Corral Fly

Job ID: 890-4938-1
SDG: 23E-02502

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	T104704400-23-26	06-30-24

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: Vertex
Project/Site: Corral Fly

Job ID: 890-4938-1
SDG: 23E-02502

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	EPA	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

EPA = US Environmental Protection Agency

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: Vertex
Project/Site: Corral Fly

Job ID: 890-4938-1
SDG: 23E-02502

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-4938-1	BES23-30 0.5'	Solid	07/12/23 10:00	07/12/23 16:02	0.5
890-4938-2	BES23-31 0.5'	Solid	07/12/23 10:05	07/12/23 16:02	0.5
890-4938-3	BES23-32 0.5'	Solid	07/12/23 10:10	07/12/23 16:02	0.5
890-4938-4	BES23-33 0.5'	Solid	07/12/23 10:15	07/12/23 16:02	0.5
890-4938-5	BES23-34 0.5'	Solid	07/12/23 10:20	07/12/23 16:02	0.5
890-4938-6	BES23-35 0.5'	Solid	07/12/23 10:25	07/12/23 16:02	0.5
890-4938-7	BES23-36 0.5'	Solid	07/12/23 10:30	07/12/23 16:02	0.5
890-4938-8	BES23-37 0.5'	Solid	07/12/23 10:35	07/12/23 16:02	0.5
890-4938-9	BES23-38 0.5'	Solid	07/12/23 10:40	07/12/23 16:02	0.5
890-4938-10	BES23-39 0.5'	Solid	07/12/23 10:45	07/12/23 16:02	0.5
890-4938-11	BES23-40 0.5'	Solid	07/12/23 10:50	07/12/23 16:02	0.5

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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:	Chance Dixon	Bill to: (if different)	Rob Kirk
Company Name:	Vertex	Company Name:	Solaris
Address:		Address:	
City, State ZIP:		City, State ZIP:	
Phone:	Email:		

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:	Corral Fly	Turn Around	
Project Number:	23E-02502	☒ Routine ☐ Rush	
Project Location:		Due Date:	
Sampler's Name:	Hunter Klein	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:	TNM007
Cooler Custody Seals:	Yes No (N/A)	Correction Factor:	-0.2
Sample Custody Seals:	Yes No (N/A)	Temperature Reading:	19.2
Total Containers:		Corrected Temperature:	19.0

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

890-4938 Chain of Custody

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Grab/Comp	# of Cont	Pres. Code	TPH	BTEX	Cl	Sample Comments
BES23-30 0.5'	Soil	7/12/23	10:00			5		X	X	X	
BES23-31 0.5'			10:05								
BES23-32 0.5'			10:10								
BES23-33 0.5'			10:15								
BES23-34 0.5'			10:20								
BES23-35 0.5'			10:25								
BES23-36 0.5'			10:30								
BES23-37 0.5'			10:35								
BES23-38 0.5'			10:40								
BES23-39 0.5'		7/12/23	10:45			5		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

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 Hunter Klein		7.12.23 1602	2		
3			4		
5			6		

Revised Date: 08/25/2020 Rev: 2020.2

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Received by OCD: 7/24/2024 3:24:20 PM

Released to Imaging: 7/26/2024 3:59:45 PM

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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: _____

www.xenco.com Page 2 of 2

Project Manager:	Chance Dixon	Bill to: (if different)	Rob Kirk
Company Name:	Vertex	Company Name:	Solaris
Address:		Address:	
City, State ZIP:		City, State ZIP:	
Phone:	Email:		

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:	Corral Fly	Turn Around	
Project Number:	23E-02502	☒ Routine ☐ Rush	
Project Location:		Due Date:	
Sampler's Name:	Hunter Klein	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:		
Cooler Custody Seals:	Yes No N/A	Correction Factor:		
Sample Custody Seals:	Yes No N/A	Temperature Reading:		
Total Containers:		Corrected Temperature:		

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

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Grab/ Comp	# of Cont	Pres. Code	Parameters: TPH	BTEX	Cl	Sample Comments
BES23-40 0.5'	Soil	7/12/23	10:50			5		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

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 Hunter Klein	Clue	7-12-23 1600	2		
3			4		
5			6		

Revised Date: 08/25/2020 Rev. 2020.2

Received by OCD: 7/24/2024 3:24:20 PM
Released to Imaging: 7/26/2024 3:59:45 PM
7/28/2023

Login Sample Receipt Checklist

Client: Vertex

Job Number: 890-4938-1
SDG Number: 23E-02502

Login Number: 4938
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: Vertex

Job Number: 890-4938-1
SDG Number: 23E-02502

Login Number: 4938
List Number: 2
Creator: Rodriguez, Leticia

List Source: Eurofins Midland
List Creation: 07/14/23 11:05 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	

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ANALYTICAL REPORT

PREPARED FOR

Attn: Chance Dixon
Vertex
3101 Boyd Dr
Carlsbad, New Mexico 88220

Generated 7/31/2023 3:20:26 PM

JOB DESCRIPTION

Corral Fly

JOB NUMBER

890-4943-1

Eurofins Carlsbad
1089 N Canal St.
Carlsbad NM 88220

See page two for job notes and contact information.

Released to Imaging: 7/26/2024 3:39:45 PM

my EOL

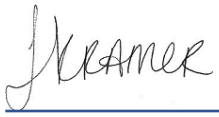
Eurofins Carlsbad

Job Notes

This report may not be reproduced except in full, and with written approval from the laboratory. The results relate only to the samples tested. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

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
7/31/2023 3:20:26 PM

Authorized for release by
Jessica Kramer, Project Manager
Jessica.Kramer@et.eurofinsus.com
(432)704-5440

Client: Vertex
Project/Site: Corral Fly

Laboratory Job ID: 890-4943-1

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Definitions/Glossary

Client: Vertex Job ID: 890-4943-1
Project/Site: Corral Fly

Qualifiers

GC VOA

Qualifier	Qualifier Description
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.
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.

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: Vertex
Project/Site: Corral Fly

Job ID: 890-4943-1

Job ID: 890-4943-1

Laboratory: Eurofins Carlsbad

Narrative

Job Narrative
890-4943-1

Receipt
The samples were received on 7/13/2023 4:18 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 15.0°C

Receipt Exceptions
The following samples were received and analyzed from an unpreserved bulk soil jar: BES23-41 0.5' (890-4943-1), BES23-42 0.5' (890-4943-2), BES23-43 0.5' (890-4943-3), BES23-44 0.5' (890-4943-4), BES23-45 0.5' (890-4943-5), BES23-46 0.5' (890-4943-6), BES23-47 0.5' (890-4943-7), BES23-48 0.5' (890-4943-8), BES23-49 0.5' (890-4943-9), BES23-50 0.5' (890-4943-10), BES23-51 0.5' (890-4943-11), BES23-52 0.5' (890-4943-12), BES23-53 0.5' (890-4943-13), BES23-54 0.5' (890-4943-14) and BES23-55 0.5' (890-4943-15).

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: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 880-58356 and analytical batch 880-58682 were outside control limits for one or more analytes. See QC Sample Results for detail. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery is within acceptance limits.

Method 8015MOD_NM: Surrogate recovery for the following samples were outside control limits: BES23-48 0.5' (890-4943-8), BES23-50 0.5' (890-4943-10), BES23-51 0.5' (890-4943-11), BES23-53 0.5' (890-4943-13) and (890-4943-A-1-I MSD). Evidence of matrix interferences is not obvious.

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: Vertex
Project/Site: Corral Fly

Job ID: 890-4943-1

Client Sample ID: BES23-41 0.5'

Lab Sample ID: 890-4943-1
Matrix: Solid
Date Collected: 07/13/23 10:00
Date Received: 07/13/23 16:18
Sample Depth: 0.5

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		07/17/23 13:15	07/17/23 22:21	1
Ethylbenzene	<0.00202	U	0.00202		mg/Kg		07/17/23 13:15	07/17/23 22:21	1
Toluene	<0.00202	U	0.00202		mg/Kg		07/17/23 13:15	07/17/23 22:21	1
Xylenes, Total	<0.00403	U	0.00403		mg/Kg		07/17/23 13:15	07/17/23 22:21	1
m-Xylene & p-Xylene	<0.00403	U	0.00403		mg/Kg		07/17/23 13:15	07/17/23 22:21	1
o-Xylene	<0.00202	U	0.00202		mg/Kg		07/17/23 13:15	07/17/23 22:21	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*92*		*70 - 130*	*07/17/23 13:15*	*07/17/23 22:21*	*1*
1,4-Difluorobenzene (Surr)	*103*		*70 - 130*	*07/17/23 13:15*	*07/17/23 22:21*	*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			07/18/23 10:23	1

Method: SW846 8015 NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**51.9**		50.3		mg/Kg			07/31/23 16:05	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	<50.3	U F1 F2	50.3		mg/Kg		07/24/23 12:58	07/28/23 10:52	1
Diesel Range Organics (Over C10-C28)	**51.9**	**F1**	50.3		mg/Kg		07/24/23 12:58	07/28/23 10:52	1
OII Range Organics (Over C28-C36)	<50.3	U	50.3		mg/Kg		07/24/23 12:58	07/28/23 10:52	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*72*		*70 - 130*	*07/24/23 12:58*	*07/28/23 10:52*	*1*
o-Terphenyl	*86*		*70 - 130*	*07/24/23 12:58*	*07/28/23 10:52*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**1470**		25.1		mg/Kg			07/17/23 18:10	5

Client Sample ID: BES23-42 0.5'

Lab Sample ID: 890-4943-2
Matrix: Solid
Date Collected: 07/13/23 10:05
Date Received: 07/13/23 16:18
Sample Depth: 0.5

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		07/17/23 13:15	07/17/23 22:42	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		07/17/23 13:15	07/17/23 22:42	1
Toluene	<0.00199	U	0.00199		mg/Kg		07/17/23 13:15	07/17/23 22:42	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		07/17/23 13:15	07/17/23 22:42	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		07/17/23 13:15	07/17/23 22:42	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		07/17/23 13:15	07/17/23 22:42	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*93*		*70 - 130*	*07/17/23 13:15*	*07/17/23 22:42*	*1*

Client Sample Results

Client: Vertex
Project/Site: Corral Fly

Job ID: 890-4943-1

Client Sample ID: BES23-42 0.5'

Lab Sample ID: 890-4943-2
Matrix: Solid
Date Collected: 07/13/23 10:05
Date Received: 07/13/23 16:18
Sample Depth: 0.5

Method: SW846 8021B - Volatile Organic Compounds (GC) (Continued)

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Difluorobenzene (Surr)	*114*		*70 - 130*	*07/17/23 13:15*	*07/17/23 22:42*	*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			07/18/23 10:23	1

Method: SW846 8015 NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**111**		50.2		mg/Kg			07/31/23 16:05	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	<50.2	U	50.2		mg/Kg		07/24/23 12:58	07/28/23 11:59	1
Diesel Range Organics (Over C10-C28)	**111**		50.2		mg/Kg		07/24/23 12:58	07/28/23 11:59	1
OII Range Organics (Over C28-C36)	<50.2	U	50.2		mg/Kg		07/24/23 12:58	07/28/23 11:59	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*75*		*70 - 130*	*07/24/23 12:58*	*07/28/23 11:59*	*1*
o-Terphenyl	*82*		*70 - 130*	*07/24/23 12:58*	*07/28/23 11:59*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**6100**		99.6		mg/Kg			07/17/23 18:25	20

Client Sample ID: BES23-43 0.5'

Lab Sample ID: 890-4943-3
Matrix: Solid
Date Collected: 07/13/23 10:10
Date Received: 07/13/23 16:18
Sample Depth: 0.5

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		07/17/23 13:15	07/17/23 23:03	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		07/17/23 13:15	07/17/23 23:03	1
Toluene	<0.00200	U	0.00200		mg/Kg		07/17/23 13:15	07/17/23 23:03	1
Xylenes, Total	<0.00399	U	0.00399		mg/Kg		07/17/23 13:15	07/17/23 23:03	1
m-Xylene & p-Xylene	<0.00399	U	0.00399		mg/Kg		07/17/23 13:15	07/17/23 23:03	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		07/17/23 13:15	07/17/23 23:03	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*92*		*70 - 130*	*07/17/23 13:15*	*07/17/23 23:03*	*1*
1,4-Difluorobenzene (Surr)	*113*		*70 - 130*	*07/17/23 13:15*	*07/17/23 23:03*	*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			07/18/23 10:23	1

Method: SW846 8015 NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**57.0**		49.7		mg/Kg			07/31/23 16:05	1

Client Sample Results

Client: Vertex
Project/Site: Corral Fly

Job ID: 890-4943-1

Client Sample ID: BES23-43 0.5'

Lab Sample ID: 890-4943-3
Matrix: Solid
Date Collected: 07/13/23 10:10
Date Received: 07/13/23 16:18
Sample Depth: 0.5

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	<49.7	U	49.7		mg/Kg		07/24/23 12:58	07/28/23 12:21	1
Diesel Range Organics (Over C10-C28)	**57.0**		49.7		mg/Kg		07/24/23 12:58	07/28/23 12:21	1
OII Range Organics (Over C28-C36)	<49.7	U	49.7		mg/Kg		07/24/23 12:58	07/28/23 12:21	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*69*	*S1-*	*70 - 130*	*07/24/23 12:58*	*07/28/23 12:21*	*1*
o-Terphenyl	*77*		*70 - 130*	*07/24/23 12:58*	*07/28/23 12:21*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**2800**		49.7		mg/Kg			07/17/23 18:30	10

Client Sample ID: BES23-44 0.5'

Lab Sample ID: 890-4943-4
Matrix: Solid
Date Collected: 07/13/23 10:15
Date Received: 07/13/23 16:18
Sample Depth: 0.5

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		07/17/23 13:15	07/17/23 23:23	1
Ethylbenzene	<0.00201	U	0.00201		mg/Kg		07/17/23 13:15	07/17/23 23:23	1
Toluene	<0.00201	U	0.00201		mg/Kg		07/17/23 13:15	07/17/23 23:23	1
Xylenes, Total	<0.00402	U	0.00402		mg/Kg		07/17/23 13:15	07/17/23 23:23	1
m-Xylene & p-Xylene	<0.00402	U	0.00402		mg/Kg		07/17/23 13:15	07/17/23 23:23	1
o-Xylene	<0.00201	U	0.00201		mg/Kg		07/17/23 13:15	07/17/23 23:23	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*96*		*70 - 130*	*07/17/23 13:15*	*07/17/23 23:23*	*1*
1,4-Difluorobenzene (Surr)	*111*		*70 - 130*	*07/17/23 13:15*	*07/17/23 23:23*	*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			07/18/23 10:23	1

Method: SW846 8015 NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.6	U	49.6		mg/Kg			07/31/23 16:05	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	<49.6	U	49.6		mg/Kg		07/24/23 12:58	07/28/23 12:44	1
Diesel Range Organics (Over C10-C28)	<49.6	U	49.6		mg/Kg		07/24/23 12:58	07/28/23 12:44	1
OII Range Organics (Over C28-C36)	<49.6	U	49.6		mg/Kg		07/24/23 12:58	07/28/23 12:44	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*70*		*70 - 130*	*07/24/23 12:58*	*07/28/23 12:44*	*1*
o-Terphenyl	*83*		*70 - 130*	*07/24/23 12:58*	*07/28/23 12:44*	*1*

Client Sample Results

Client: Vertex
Project/Site: Corral Fly

Job ID: 890-4943-1

Client Sample ID: BES23-44 0.5'

Lab Sample ID: 890-4943-4
Matrix: Solid
Date Collected: 07/13/23 10:15
Date Received: 07/13/23 16:18
Sample Depth: 0.5

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**2990**		50.2		mg/Kg			07/17/23 18:35	10

Client Sample ID: BES23-45 0.5'

Lab Sample ID: 890-4943-5
Matrix: Solid
Date Collected: 07/13/23 10:20
Date Received: 07/13/23 16:18
Sample Depth: 0.5

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		07/17/23 13:15	07/17/23 23:44	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		07/17/23 13:15	07/17/23 23:44	1
Toluene	<0.00200	U	0.00200		mg/Kg		07/17/23 13:15	07/17/23 23:44	1
Xylenes, Total	<0.00401	U	0.00401		mg/Kg		07/17/23 13:15	07/17/23 23:44	1
m-Xylene & p-Xylene	<0.00401	U	0.00401		mg/Kg		07/17/23 13:15	07/17/23 23:44	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		07/17/23 13:15	07/17/23 23:44	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*104*		*70 - 130*	*07/17/23 13:15*	*07/17/23 23:44*	*1*
1,4-Difluorobenzene (Surr)	*110*		*70 - 130*	*07/17/23 13:15*	*07/17/23 23:44*	*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			07/18/23 10:23	1

Method: SW846 8015 NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**107**		49.5		mg/Kg			07/31/23 16:05	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	<49.5	U	49.5		mg/Kg		07/24/23 12:58	07/28/23 13:06	1
Diesel Range Organics (Over C10-C28)	**107**		49.5		mg/Kg		07/24/23 12:58	07/28/23 13:06	1
OII Range Organics (Over C28-C36)	<49.5	U	49.5		mg/Kg		07/24/23 12:58	07/28/23 13:06	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*84*		*70 - 130*	*07/24/23 12:58*	*07/28/23 13:06*	*1*
o-Terphenyl	*105*		*70 - 130*	*07/24/23 12:58*	*07/28/23 13:06*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**2220**		24.8		mg/Kg			07/17/23 18:40	5

Client Sample Results

Client: Vertex
Project/Site: Corral Fly

Job ID: 890-4943-1

Client Sample ID: BES23-46 0.5'

Lab Sample ID: 890-4943-6
Matrix: Solid
Date Collected: 07/13/23 10:25
Date Received: 07/13/23 16:18
Sample Depth: 0.5

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		07/17/23 13:15	07/18/23 00:05	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		07/17/23 13:15	07/18/23 00:05	1
Toluene	<0.00199	U	0.00199		mg/Kg		07/17/23 13:15	07/18/23 00:05	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		07/17/23 13:15	07/18/23 00:05	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		07/17/23 13:15	07/18/23 00:05	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		07/17/23 13:15	07/18/23 00:05	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*94*		*70 - 130*	*07/17/23 13:15*	*07/18/23 00:05*	*1*
1,4-Difluorobenzene (Surr)	*110*		*70 - 130*	*07/17/23 13:15*	*07/18/23 00:05*	*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			07/18/23 10:23	1

Method: SW846 8015 NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.5	U	50.5		mg/Kg			07/31/23 16:05	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	<50.5	U	50.5		mg/Kg		07/24/23 12:58	07/28/23 13:28	1
Diesel Range Organics (Over C10-C28)	<50.5	U	50.5		mg/Kg		07/24/23 12:58	07/28/23 13:28	1
OII Range Organics (Over C28-C36)	<50.5	U	50.5		mg/Kg		07/24/23 12:58	07/28/23 13:28	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*71*		*70 - 130*	*07/24/23 12:58*	*07/28/23 13:28*	*1*
o-Terphenyl	*85*		*70 - 130*	*07/24/23 12:58*	*07/28/23 13:28*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**1500**		25.2		mg/Kg			07/17/23 18:55	5

Client Sample ID: BES23-47 0.5'

Lab Sample ID: 890-4943-7
Matrix: Solid
Date Collected: 07/13/23 10:30
Date Received: 07/13/23 16:18
Sample Depth: 0.5

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		07/17/23 13:15	07/18/23 00:25	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		07/17/23 13:15	07/18/23 00:25	1
Toluene	<0.00200	U	0.00200		mg/Kg		07/17/23 13:15	07/18/23 00:25	1
Xylenes, Total	<0.00399	U	0.00399		mg/Kg		07/17/23 13:15	07/18/23 00:25	1
m-Xylene & p-Xylene	<0.00399	U	0.00399		mg/Kg		07/17/23 13:15	07/18/23 00:25	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		07/17/23 13:15	07/18/23 00:25	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*101*		*70 - 130*	*07/17/23 13:15*	*07/18/23 00:25*	*1*

Client Sample Results

Client: Vertex
Project/Site: Corral Fly

Job ID: 890-4943-1

Client Sample ID: BES23-47 0.5'

Lab Sample ID: 890-4943-7
Matrix: Solid
Date Collected: 07/13/23 10:30
Date Received: 07/13/23 16:18
Sample Depth: 0.5

Method: SW846 8021B - Volatile Organic Compounds (GC) (Continued)

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Difluorobenzene (Surr)	*107*		*70 - 130*	*07/17/23 13:15*	*07/18/23 00:25*	*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			07/18/23 10:23	1

Method: SW846 8015 NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**76.6**		50.5		mg/Kg			07/31/23 16:05	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	<50.5	U	50.5		mg/Kg		07/24/23 12:58	07/28/23 13:50	1
Diesel Range Organics (Over C10-C28)	**76.6**		50.5		mg/Kg		07/24/23 12:58	07/28/23 13:50	1
OII Range Organics (Over C28-C36)	<50.5	U	50.5		mg/Kg		07/24/23 12:58	07/28/23 13:50	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*92*		*70 - 130*	*07/24/23 12:58*	*07/28/23 13:50*	*1*
o-Terphenyl	*103*		*70 - 130*	*07/24/23 12:58*	*07/28/23 13:50*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**2750**		25.0		mg/Kg			07/17/23 19:00	5

Client Sample ID: BES23-48 0.5'

Lab Sample ID: 890-4943-8
Matrix: Solid
Date Collected: 07/13/23 10:35
Date Received: 07/13/23 16:18
Sample Depth: 0.5

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00198	U	0.00198		mg/Kg		07/17/23 13:15	07/18/23 00:46	1
Ethylbenzene	<0.00198	U	0.00198		mg/Kg		07/17/23 13:15	07/18/23 00:46	1
Toluene	<0.00198	U	0.00198		mg/Kg		07/17/23 13:15	07/18/23 00:46	1
Xylenes, Total	<0.00396	U	0.00396		mg/Kg		07/17/23 13:15	07/18/23 00:46	1
m-Xylene & p-Xylene	<0.00396	U	0.00396		mg/Kg		07/17/23 13:15	07/18/23 00:46	1
o-Xylene	<0.00198	U	0.00198		mg/Kg		07/17/23 13:15	07/18/23 00:46	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*96*		*70 - 130*	*07/17/23 13:15*	*07/18/23 00:46*	*1*
1,4-Difluorobenzene (Surr)	*108*		*70 - 130*	*07/17/23 13:15*	*07/18/23 00:46*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00396	U	0.00396		mg/Kg			07/18/23 10:23	1

Method: SW846 8015 NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.4	U	50.4		mg/Kg			07/31/23 16:05	1

Client Sample Results

Client: Vertex
Project/Site: Corral Fly

Job ID: 890-4943-1

Client Sample ID: BES23-48 0.5'

Lab Sample ID: 890-4943-8
Matrix: Solid
Date Collected: 07/13/23 10:35
Date Received: 07/13/23 16:18
Sample Depth: 0.5

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	<50.4	U	50.4		mg/Kg		07/24/23 12:58	07/28/23 14:13	1
Diesel Range Organics (Over C10-C28)	<50.4	U	50.4		mg/Kg		07/24/23 12:58	07/28/23 14:13	1
OII Range Organics (Over C28-C36)	<50.4	U	50.4		mg/Kg		07/24/23 12:58	07/28/23 14:13	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*63*	*S1-*	*70 - 130*	*07/24/23 12:58*	*07/28/23 14:13*	*1*
o-Terphenyl	*68*	*S1-*	*70 - 130*	*07/24/23 12:58*	*07/28/23 14:13*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**2470**		24.9		mg/Kg			07/17/23 19:05	5

Client Sample ID: BES23-49 0.5'

Lab Sample ID: 890-4943-9
Matrix: Solid
Date Collected: 07/13/23 10:40
Date Received: 07/13/23 16:18
Sample Depth: 0.5

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		07/17/23 13:15	07/18/23 01:06	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		07/17/23 13:15	07/18/23 01:06	1
Toluene	<0.00200	U	0.00200		mg/Kg		07/17/23 13:15	07/18/23 01:06	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		07/17/23 13:15	07/18/23 01:06	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		07/17/23 13:15	07/18/23 01:06	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		07/17/23 13:15	07/18/23 01:06	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*97*		*70 - 130*	*07/17/23 13:15*	*07/18/23 01:06*	*1*
1,4-Difluorobenzene (Surr)	*111*		*70 - 130*	*07/17/23 13:15*	*07/18/23 01:06*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00400	U	0.00400		mg/Kg			07/18/23 10:23	1

Method: SW846 8015 NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.3	U	50.3		mg/Kg			07/31/23 16:05	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	<50.3	U	50.3		mg/Kg		07/24/23 12:58	07/28/23 14:35	1
Diesel Range Organics (Over C10-C28)	<50.3	U	50.3		mg/Kg		07/24/23 12:58	07/28/23 14:35	1
OII Range Organics (Over C28-C36)	<50.3	U	50.3		mg/Kg		07/24/23 12:58	07/28/23 14:35	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*72*		*70 - 130*	*07/24/23 12:58*	*07/28/23 14:35*	*1*
o-Terphenyl	*76*		*70 - 130*	*07/24/23 12:58*	*07/28/23 14:35*	*1*

Client Sample Results

Client: Vertex
Project/Site: Corral Fly

Job ID: 890-4943-1

Client Sample ID: BES23-49 0.5'

Lab Sample ID: 890-4943-9
Matrix: Solid
Date Collected: 07/13/23 10:40
Date Received: 07/13/23 16:18
Sample Depth: 0.5

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	626		24.8		mg/Kg			07/17/23 19:10	5

Client Sample ID: BES23-50 0.5'

Lab Sample ID: 890-4943-10
Matrix: Solid
Date Collected: 07/13/23 10:45
Date Received: 07/13/23 16:18
Sample Depth: 0.5

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		07/17/23 13:15	07/18/23 01:27	1
Ethylbenzene	<0.00202	U	0.00202		mg/Kg		07/17/23 13:15	07/18/23 01:27	1
Toluene	<0.00202	U	0.00202		mg/Kg		07/17/23 13:15	07/18/23 01:27	1
Xylenes, Total	<0.00403	U	0.00403		mg/Kg		07/17/23 13:15	07/18/23 01:27	1
m-Xylene & p-Xylene	<0.00403	U	0.00403		mg/Kg		07/17/23 13:15	07/18/23 01:27	1
o-Xylene	<0.00202	U	0.00202		mg/Kg		07/17/23 13:15	07/18/23 01:27	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*95*		*70 - 130*	*07/17/23 13:15*	*07/18/23 01:27*	*1*
1,4-Difluorobenzene (Surr)	*110*		*70 - 130*	*07/17/23 13:15*	*07/18/23 01:27*	*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			07/18/23 10:23	1

Method: SW846 8015 NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.7	U	49.7		mg/Kg			07/31/23 16:05	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	<49.7	U	49.7		mg/Kg		07/24/23 12:58	07/28/23 14:57	1
Diesel Range Organics (Over C10-C28)	<49.7	U	49.7		mg/Kg		07/24/23 12:58	07/28/23 14:57	1
OII Range Organics (Over C28-C36)	<49.7	U	49.7		mg/Kg		07/24/23 12:58	07/28/23 14:57	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*62*	*S1-*	*70 - 130*	*07/24/23 12:58*	*07/28/23 14:57*	*1*
o-Terphenyl	*69*	*S1-*	*70 - 130*	*07/24/23 12:58*	*07/28/23 14:57*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	499		25.1		mg/Kg			07/17/23 19:15	5

Client Sample Results

Client: Vertex
Project/Site: Corral Fly

Job ID: 890-4943-1

Client Sample ID: BES23-51 0.5'

Lab Sample ID: 890-4943-11
Matrix: Solid
Date Collected: 07/13/23 10:50
Date Received: 07/13/23 16:18
Sample Depth: 0.5

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		07/17/23 13:15	07/18/23 02:49	1
Ethylbenzene	<0.00201	U	0.00201		mg/Kg		07/17/23 13:15	07/18/23 02:49	1
Toluene	<0.00201	U	0.00201		mg/Kg		07/17/23 13:15	07/18/23 02:49	1
Xylenes, Total	<0.00402	U	0.00402		mg/Kg		07/17/23 13:15	07/18/23 02:49	1
m-Xylene & p-Xylene	<0.00402	U	0.00402		mg/Kg		07/17/23 13:15	07/18/23 02:49	1
o-Xylene	<0.00201	U	0.00201		mg/Kg		07/17/23 13:15	07/18/23 02:49	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*97*		*70 - 130*	*07/17/23 13:15*	*07/18/23 02:49*	*1*
1,4-Difluorobenzene (Surr)	*100*		*70 - 130*	*07/17/23 13:15*	*07/18/23 02:49*	*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			07/18/23 10:23	1

Method: SW846 8015 NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**51.5**		49.6		mg/Kg			07/31/23 16:05	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	<49.6	U	49.6		mg/Kg		07/24/23 12:58	07/28/23 15:41	1
Diesel Range Organics (Over C10-C28)	**51.5**		49.6		mg/Kg		07/24/23 12:58	07/28/23 15:41	1
OII Range Organics (Over C28-C36)	<49.6	U	49.6		mg/Kg		07/24/23 12:58	07/28/23 15:41	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*68*	*S1-*	*70 - 130*	*07/24/23 12:58*	*07/28/23 15:41*	*1*
o-Terphenyl	*80*		*70 - 130*	*07/24/23 12:58*	*07/28/23 15:41*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**141**		4.97		mg/Kg			07/18/23 11:15	1

Client Sample ID: BES23-52 0.5'

Lab Sample ID: 890-4943-12
Matrix: Solid
Date Collected: 07/13/23 10:55
Date Received: 07/13/23 16:18
Sample Depth: 0.5

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		07/17/23 13:15	07/18/23 03:10	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		07/17/23 13:15	07/18/23 03:10	1
Toluene	<0.00200	U	0.00200		mg/Kg		07/17/23 13:15	07/18/23 03:10	1
Xylenes, Total	<0.00401	U	0.00401		mg/Kg		07/17/23 13:15	07/18/23 03:10	1
m-Xylene & p-Xylene	<0.00401	U	0.00401		mg/Kg		07/17/23 13:15	07/18/23 03:10	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		07/17/23 13:15	07/18/23 03:10	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*97*		*70 - 130*	*07/17/23 13:15*	*07/18/23 03:10*	*1*

Client Sample Results

Client: Vertex
Project/Site: Corral Fly

Job ID: 890-4943-1

Client Sample ID: BES23-52 0.5'

Lab Sample ID: 890-4943-12
Matrix: Solid
Date Collected: 07/13/23 10:55
Date Received: 07/13/23 16:18
Sample Depth: 0.5

Method: SW846 8021B - Volatile Organic Compounds (GC) (Continued)

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Difluorobenzene (Surr)	*113*		*70 - 130*	*07/17/23 13:15*	*07/18/23 03:10*	*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			07/18/23 10:23	1

Method: SW846 8015 NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**66.2**		49.8		mg/Kg			07/31/23 16:05	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		07/24/23 12:58	07/28/23 16:03	1
Diesel Range Organics (Over C10-C28)	**66.2**		49.8		mg/Kg		07/24/23 12:58	07/28/23 16:03	1
OII Range Organics (Over C28-C36)	<49.8	U	49.8		mg/Kg		07/24/23 12:58	07/28/23 16:03	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*75*		*70 - 130*	*07/24/23 12:58*	*07/28/23 16:03*	*1*
o-Terphenyl	*80*		*70 - 130*	*07/24/23 12:58*	*07/28/23 16:03*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**348**		5.00		mg/Kg			07/17/23 19:34	1

Client Sample ID: BES23-53 0.5'

Lab Sample ID: 890-4943-13
Matrix: Solid
Date Collected: 07/13/23 11:00
Date Received: 07/13/23 16:18
Sample Depth: 0.5

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		07/17/23 13:15	07/18/23 03:31	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		07/17/23 13:15	07/18/23 03:31	1
Toluene	<0.00199	U	0.00199		mg/Kg		07/17/23 13:15	07/18/23 03:31	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		07/17/23 13:15	07/18/23 03:31	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		07/17/23 13:15	07/18/23 03:31	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		07/17/23 13:15	07/18/23 03:31	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*100*		*70 - 130*	*07/17/23 13:15*	*07/18/23 03:31*	*1*
1,4-Difluorobenzene (Surr)	*110*		*70 - 130*	*07/17/23 13:15*	*07/18/23 03:31*	*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			07/18/23 10:23	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			07/31/23 16:05	1

Eurofins Carlsbad

Client Sample Results

Client: Vertex
Project/Site: Corral Fly

Job ID: 890-4943-1

Client Sample ID: BES23-53 0.5'

Lab Sample ID: 890-4943-13
Matrix: Solid
Date Collected: 07/13/23 11:00
Date Received: 07/13/23 16:18
Sample Depth: 0.5

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		07/24/23 12:58	07/28/23 16:26	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		07/24/23 12:58	07/28/23 16:26	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		07/24/23 12:58	07/28/23 16:26	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*67*	*S1-*	*70 - 130*	*07/24/23 12:58*	*07/28/23 16:26*	*1*
o-Terphenyl	*71*		*70 - 130*	*07/24/23 12:58*	*07/28/23 16:26*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**261**		4.99		mg/Kg			07/17/23 19:39	1

Client Sample ID: BES23-54 0.5'

Lab Sample ID: 890-4943-14
Matrix: Solid
Date Collected: 07/13/23 11:05
Date Received: 07/13/23 16:18
Sample Depth: 0.5

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		07/17/23 13:15	07/18/23 03:51	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		07/17/23 13:15	07/18/23 03:51	1
Toluene	<0.00200	U	0.00200		mg/Kg		07/17/23 13:15	07/18/23 03:51	1
Xylenes, Total	<0.00399	U	0.00399		mg/Kg		07/17/23 13:15	07/18/23 03:51	1
m-Xylene & p-Xylene	<0.00399	U	0.00399		mg/Kg		07/17/23 13:15	07/18/23 03:51	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		07/17/23 13:15	07/18/23 03:51	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*104*		*70 - 130*	*07/17/23 13:15*	*07/18/23 03:51*	*1*
1,4-Difluorobenzene (Surr)	*112*		*70 - 130*	*07/17/23 13:15*	*07/18/23 03:51*	*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			07/18/23 10:23	1

Method: SW846 8015 NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.3	U	50.3		mg/Kg			07/31/23 16:05	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	<50.3	U	50.3		mg/Kg		07/24/23 12:58	07/28/23 16:48	1
Diesel Range Organics (Over C10-C28)	<50.3	U	50.3		mg/Kg		07/24/23 12:58	07/28/23 16:48	1
OII Range Organics (Over C28-C36)	<50.3	U	50.3		mg/Kg		07/24/23 12:58	07/28/23 16:48	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*82*		*70 - 130*	*07/24/23 12:58*	*07/28/23 16:48*	*1*
o-Terphenyl	*93*		*70 - 130*	*07/24/23 12:58*	*07/28/23 16:48*	*1*

Client Sample Results

Client: Vertex
Project/Site: Corral Fly

Job ID: 890-4943-1

Client Sample ID: BES23-54 0.5'

Lab Sample ID: 890-4943-14
Matrix: Solid
Date Collected: 07/13/23 11:05
Date Received: 07/13/23 16:18
Sample Depth: 0.5

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**78.3**		5.01		mg/Kg			07/17/23 19:54	1

Client Sample ID: BES23-55 0.5'

Lab Sample ID: 890-4943-15
Matrix: Solid
Date Collected: 07/13/23 11:10
Date Received: 07/13/23 16:18
Sample Depth: 0.5

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		07/17/23 13:15	07/18/23 04:12	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		07/17/23 13:15	07/18/23 04:12	1
Toluene	<0.00200	U	0.00200		mg/Kg		07/17/23 13:15	07/18/23 04:12	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		07/17/23 13:15	07/18/23 04:12	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		07/17/23 13:15	07/18/23 04:12	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		07/17/23 13:15	07/18/23 04:12	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*99*		*70 - 130*	*07/17/23 13:15*	*07/18/23 04:12*	*1*
1,4-Difluorobenzene (Surr)	*109*		*70 - 130*	*07/17/23 13:15*	*07/18/23 04:12*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00400	U	0.00400		mg/Kg			07/18/23 10:23	1

Method: SW846 8015 NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**60.4**		50.4		mg/Kg			07/31/23 16:05	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	<50.4	U	50.4		mg/Kg		07/24/23 12:58	07/28/23 17:10	1
Diesel Range Organics (Over C10-C28)	**60.4**		50.4		mg/Kg		07/24/23 12:58	07/28/23 17:10	1
OII Range Organics (Over C28-C36)	<50.4	U	50.4		mg/Kg		07/24/23 12:58	07/28/23 17:10	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*76*		*70 - 130*	*07/24/23 12:58*	*07/28/23 17:10*	*1*
o-Terphenyl	*90*		*70 - 130*	*07/24/23 12:58*	*07/28/23 17:10*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**4480**		50.3		mg/Kg			07/17/23 19:59	10

Surrogate Summary

Client: Vertex
Project/Site: Corral Fly

Job ID: 890-4943-1

Method: 8021B - Volatile Organic Compounds (GC)

Matrix: Solid **Prep Type: Total/NA**

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits) BFB1 (70-130)	DFBZ1 (70-130)
890-4943-1	BES23-41 0.5'	92	103
890-4943-1 MS	BES23-41 0.5'	98	104
890-4943-1 MSD	BES23-41 0.5'	106	107
890-4943-2	BES23-42 0.5'	93	114
890-4943-3	BES23-43 0.5'	92	113
890-4943-4	BES23-44 0.5'	96	111
890-4943-5	BES23-45 0.5'	104	110
890-4943-6	BES23-46 0.5'	94	110
890-4943-7	BES23-47 0.5'	101	107
890-4943-8	BES23-48 0.5'	96	108
890-4943-9	BES23-49 0.5'	97	111
890-4943-10	BES23-50 0.5'	95	110
890-4943-11	BES23-51 0.5'	97	100
890-4943-12	BES23-52 0.5'	97	113
890-4943-13	BES23-53 0.5'	100	110
890-4943-14	BES23-54 0.5'	104	112
890-4943-15	BES23-55 0.5'	99	109
LCS 880-57841/1-A	Lab Control Sample	102	101
LCSD 880-57841/2-A	Lab Control Sample Dup	103	103
MB 880-57657/5-A	Method Blank	78	96
MB 880-57841/5-A	Method Blank	79	95

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**

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits) 1CO1 (70-130)	OTPH1 (70-130)
890-4943-1	BES23-41 0.5'	72	86
890-4943-1 MS	BES23-41 0.5'	72	74
890-4943-1 MSD	BES23-41 0.5'	62 S1-	64 S1-
890-4943-2	BES23-42 0.5'	75	82
890-4943-3	BES23-43 0.5'	69 S1-	77
890-4943-4	BES23-44 0.5'	70	83
890-4943-5	BES23-45 0.5'	84	105
890-4943-6	BES23-46 0.5'	71	85
890-4943-7	BES23-47 0.5'	92	103
890-4943-8	BES23-48 0.5'	63 S1-	68 S1-
890-4943-9	BES23-49 0.5'	72	76
890-4943-10	BES23-50 0.5'	62 S1-	69 S1-
890-4943-11	BES23-51 0.5'	68 S1-	80
890-4943-12	BES23-52 0.5'	75	80
890-4943-13	BES23-53 0.5'	67 S1-	71
890-4943-14	BES23-54 0.5'	82	93
890-4943-15	BES23-55 0.5'	76	90
LCS 880-58356/2-A	Lab Control Sample	100	123

Surrogate Summary

Client: Vertex Job ID: 890-4943-1
Project/Site: Corral Fly

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)								
LCSD 880-58356/3-A	Lab Control Sample Dup	95	119								
MB 880-58356/1-A	Method Blank	141 S1+	176 S1+								

Surrogate Legend

1CO = 1-Chlorooctane

OTPH = o-Terphenyl

QC Sample Results

Client: Vertex
Project/Site: Corral Fly

Job ID: 890-4943-1

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-57657/5-A
Matrix: Solid
Analysis Batch: 57773

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 57657

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		07/14/23 08:31	07/17/23 11:18	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		07/14/23 08:31	07/17/23 11:18	1
Toluene	<0.00200	U	0.00200		mg/Kg		07/14/23 08:31	07/17/23 11:18	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		07/14/23 08:31	07/17/23 11:18	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		07/14/23 08:31	07/17/23 11:18	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		07/14/23 08:31	07/17/23 11:18	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*78*		*70 - 130*	*07/14/23 08:31*	*07/17/23 11:18*	*1*
1,4-Difluorobenzene (Surr)	*96*		*70 - 130*	*07/14/23 08:31*	*07/17/23 11:18*	*1*

Lab Sample ID: MB 880-57841/5-A
Matrix: Solid
Analysis Batch: 57773

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 57841

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		07/17/23 13:15	07/17/23 22:00	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		07/17/23 13:15	07/17/23 22:00	1
Toluene	<0.00200	U	0.00200		mg/Kg		07/17/23 13:15	07/17/23 22:00	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		07/17/23 13:15	07/17/23 22:00	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		07/17/23 13:15	07/17/23 22:00	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		07/17/23 13:15	07/17/23 22:00	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*79*		*70 - 130*	*07/17/23 13:15*	*07/17/23 22:00*	*1*
1,4-Difluorobenzene (Surr)	*95*		*70 - 130*	*07/17/23 13:15*	*07/17/23 22:00*	*1*

Lab Sample ID: LCS 880-57841/1-A
Matrix: Solid
Analysis Batch: 57773

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 57841

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene			0.100	0.09886		mg/Kg		99	70 - 130		
Ethylbenzene			0.100	0.1002		mg/Kg		100	70 - 130		
Toluene			0.100	0.1073		mg/Kg		107	70 - 130		
m-Xylene & p-Xylene			0.200	0.2012		mg/Kg		101	70 - 130		
o-Xylene			0.100	0.09839		mg/Kg		98	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*102*		*70 - 130*
1,4-Difluorobenzene (Surr)	*101*		*70 - 130*

Lab Sample ID: LCSD 880-57841/2-A
Matrix: Solid
Analysis Batch: 57773

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 57841

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene			0.100	0.09211		mg/Kg		92	70 - 130	7	35

QC Sample Results

Client: Vertex
Project/Site: Corral Fly

Job ID: 890-4943-1

Method: 8021B - Volatile Organic Compounds (GC) (Continued)

Lab Sample ID: LCSD 880-57841/2-A
Matrix: Solid
Analysis Batch: 57773

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 57841

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Ethylbenzene			0.100	0.09647		mg/Kg		96	70 - 130	4	35
Toluene			0.100	0.1024		mg/Kg		102	70 - 130	5	35
m-Xylene & p-Xylene			0.200	0.1936		mg/Kg		97	70 - 130	4	35
o-Xylene			0.100	0.09761		mg/Kg		98	70 - 130	1	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*103*		*70 - 130*
1,4-Difluorobenzene (Surr)	*103*		*70 - 130*

Lab Sample ID: 890-4943-1 MS
Matrix: Solid
Analysis Batch: 57773

Client Sample ID: BES23-41 0.5'
Prep Type: Total/NA
Prep Batch: 57841

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	<0.00202	U	0.0996	0.08300		mg/Kg		83	70 - 130
Ethylbenzene	<0.00202	U	0.0996	0.08444		mg/Kg		85	70 - 130
Toluene	<0.00202	U	0.0996	0.09080		mg/Kg		91	70 - 130
m-Xylene & p-Xylene	<0.00403	U	0.199	0.1649		mg/Kg		83	70 - 130
o-Xylene	<0.00202	U	0.0996	0.08324		mg/Kg		84	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*98*		*70 - 130*
1,4-Difluorobenzene (Surr)	*104*		*70 - 130*

Lab Sample ID: 890-4943-1 MSD
Matrix: Solid
Analysis Batch: 57773

Client Sample ID: BES23-41 0.5'
Prep Type: Total/NA
Prep Batch: 57841

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	0.09234		mg/Kg		93	70 - 130	11	35
Ethylbenzene	<0.00202	U	0.0990	0.09316		mg/Kg		94	70 - 130	10	35
Toluene	<0.00202	U	0.0990	0.1002		mg/Kg		101	70 - 130	10	35
m-Xylene & p-Xylene	<0.00403	U	0.198	0.1819		mg/Kg		92	70 - 130	10	35
o-Xylene	<0.00202	U	0.0990	0.09131		mg/Kg		92	70 - 130	9	35

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*106*		*70 - 130*
1,4-Difluorobenzene (Surr)	*107*		*70 - 130*

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

Lab Sample ID: MB 880-58356/1-A
Matrix: Solid
Analysis Batch: 58682

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 58356

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		07/24/23 12:58	07/28/23 08:15	1

QC Sample Results

Client: Vertex
Project/Site: Corral Fly

Job ID: 890-4943-1

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

Lab Sample ID: MB 880-58356/1-A
Matrix: Solid
Analysis Batch: 58682

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 58356

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		07/24/23 12:58	07/28/23 08:15	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		07/24/23 12:58	07/28/23 08:15	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*141*	*S1+*	*70 - 130*	*07/24/23 12:58*	*07/28/23 08:15*	*1*
o-Terphenyl	*176*	*S1+*	*70 - 130*	*07/24/23 12:58*	*07/28/23 08:15*	*1*

Lab Sample ID: LCS 880-58356/2-A
Matrix: Solid
Analysis Batch: 58682

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 58356

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics (GRO)-C6-C10	1000	867.5		mg/Kg		87	70 - 130
Diesel Range Organics (Over C10-C28)	1000	947.8		mg/Kg		95	70 - 130

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1-Chlorooctane	*100*		*70 - 130*
o-Terphenyl	*123*		*70 - 130*

Lab Sample ID: LCSD 880-58356/3-A
Matrix: Solid
Analysis Batch: 58682

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 58356

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	1000	907.7		mg/Kg		91	70 - 130	5	20
Diesel Range Organics (Over C10-C28)	1000	959.6		mg/Kg		96	70 - 130	1	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1-Chlorooctane	*95*		*70 - 130*
o-Terphenyl	*119*		*70 - 130*

Lab Sample ID: 890-4943-1 MS
Matrix: Solid
Analysis Batch: 58682

Client Sample ID: BES23-41 0.5'
Prep Type: Total/NA
Prep Batch: 58356

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics (GRO)-C6-C10	<50.3	U F1 F2	999	753.2		mg/Kg		71	70 - 130
Diesel Range Organics (Over C10-C28)	51.9	F1	999	688.2	F1	mg/Kg		64	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
1-Chlorooctane	*72*		*70 - 130*
o-Terphenyl	*74*		*70 - 130*

QC Sample Results

Client: Vertex
Project/Site: Corral Fly

Job ID: 890-4943-1

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

Lab Sample ID: 890-4943-1 MSD
Matrix: Solid
Analysis Batch: 58682

Client Sample ID: BES23-41 0.5'
Prep Type: Total/NA
Prep Batch: 58356

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	<50.3	U F1 F2	999	587.3	F1 F2	mg/Kg		55	70 - 130	25	20
Diesel Range Organics (Over C10-C28)	51.9	F1	999	598.6	F1	mg/Kg		55	70 - 130	14	20

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
1-Chlorooctane	*62*	*S1-*	*70 - 130*
o-Terphenyl	*64*	*S1-*	*70 - 130*

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-57836/1-A
Matrix: Solid
Analysis Batch: 57909

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			07/17/23 17:55	1

Lab Sample ID: LCS 880-57836/2-A
Matrix: Solid
Analysis Batch: 57909

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	250	249.9		mg/Kg		100	90 - 110

Lab Sample ID: LCSD 880-57836/3-A
Matrix: Solid
Analysis Batch: 57909

Client Sample ID: Lab Control Sample Dup
Prep Type: Soluble

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	250	250.3		mg/Kg		100	90 - 110	0	20

Lab Sample ID: 890-4943-1 MS
Matrix: Solid
Analysis Batch: 57909

Client Sample ID: BES23-41 0.5'
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	1470		1250	2771		mg/Kg		104	90 - 110

Lab Sample ID: 890-4943-1 MSD
Matrix: Solid
Analysis Batch: 57909

Client Sample ID: BES23-41 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	1470		1250	2778		mg/Kg		104	90 - 110	0	20

QC Sample Results

Client: Vertex
Project/Site: Corral Fly

Job ID: 890-4943-1

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: 890-4943-11 MS
Matrix: Solid
Analysis Batch: 57909

Client Sample ID: BES23-51 0.5'
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride	141		249	383.0		mg/Kg		97	90 - 110		

Lab Sample ID: 890-4943-11 MSD
Matrix: Solid
Analysis Batch: 57909

Client Sample ID: BES23-51 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	141		249	383.1		mg/Kg		97	90 - 110	0	20

QC Association Summary

Client: Vertex
Project/Site: Corral Fly

Job ID: 890-4943-1

GC VOA

Prep Batch: 57657

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-57657/5-A	Method Blank	Total/NA	Solid	5035	

Analysis Batch: 57773

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4943-1	BES23-41 0.5'	Total/NA	Solid	8021B	57841
890-4943-2	BES23-42 0.5'	Total/NA	Solid	8021B	57841
890-4943-3	BES23-43 0.5'	Total/NA	Solid	8021B	57841
890-4943-4	BES23-44 0.5'	Total/NA	Solid	8021B	57841
890-4943-5	BES23-45 0.5'	Total/NA	Solid	8021B	57841
890-4943-6	BES23-46 0.5'	Total/NA	Solid	8021B	57841
890-4943-7	BES23-47 0.5'	Total/NA	Solid	8021B	57841
890-4943-8	BES23-48 0.5'	Total/NA	Solid	8021B	57841
890-4943-9	BES23-49 0.5'	Total/NA	Solid	8021B	57841
890-4943-10	BES23-50 0.5'	Total/NA	Solid	8021B	57841
890-4943-11	BES23-51 0.5'	Total/NA	Solid	8021B	57841
890-4943-12	BES23-52 0.5'	Total/NA	Solid	8021B	57841
890-4943-13	BES23-53 0.5'	Total/NA	Solid	8021B	57841
890-4943-14	BES23-54 0.5'	Total/NA	Solid	8021B	57841
890-4943-15	BES23-55 0.5'	Total/NA	Solid	8021B	57841
MB 880-57657/5-A	Method Blank	Total/NA	Solid	8021B	57657
MB 880-57841/5-A	Method Blank	Total/NA	Solid	8021B	57841
LCS 880-57841/1-A	Lab Control Sample	Total/NA	Solid	8021B	57841
LCSD 880-57841/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	57841
890-4943-1 MS	BES23-41 0.5'	Total/NA	Solid	8021B	57841
890-4943-1 MSD	BES23-41 0.5'	Total/NA	Solid	8021B	57841

Prep Batch: 57841

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4943-1	BES23-41 0.5'	Total/NA	Solid	5035	
890-4943-2	BES23-42 0.5'	Total/NA	Solid	5035	
890-4943-3	BES23-43 0.5'	Total/NA	Solid	5035	
890-4943-4	BES23-44 0.5'	Total/NA	Solid	5035	
890-4943-5	BES23-45 0.5'	Total/NA	Solid	5035	
890-4943-6	BES23-46 0.5'	Total/NA	Solid	5035	
890-4943-7	BES23-47 0.5'	Total/NA	Solid	5035	
890-4943-8	BES23-48 0.5'	Total/NA	Solid	5035	
890-4943-9	BES23-49 0.5'	Total/NA	Solid	5035	
890-4943-10	BES23-50 0.5'	Total/NA	Solid	5035	
890-4943-11	BES23-51 0.5'	Total/NA	Solid	5035	
890-4943-12	BES23-52 0.5'	Total/NA	Solid	5035	
890-4943-13	BES23-53 0.5'	Total/NA	Solid	5035	
890-4943-14	BES23-54 0.5'	Total/NA	Solid	5035	
890-4943-15	BES23-55 0.5'	Total/NA	Solid	5035	
MB 880-57841/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-57841/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-57841/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
890-4943-1 MS	BES23-41 0.5'	Total/NA	Solid	5035	
890-4943-1 MSD	BES23-41 0.5'	Total/NA	Solid	5035	

QC Association Summary

Client: Vertex
Project/Site: Corral Fly

Job ID: 890-4943-1

GC VOA

Analysis Batch: 57930

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4943-1	BES23-41 0.5'	Total/NA	Solid	Total BTEX	
890-4943-2	BES23-42 0.5'	Total/NA	Solid	Total BTEX	
890-4943-3	BES23-43 0.5'	Total/NA	Solid	Total BTEX	
890-4943-4	BES23-44 0.5'	Total/NA	Solid	Total BTEX	
890-4943-5	BES23-45 0.5'	Total/NA	Solid	Total BTEX	
890-4943-6	BES23-46 0.5'	Total/NA	Solid	Total BTEX	
890-4943-7	BES23-47 0.5'	Total/NA	Solid	Total BTEX	
890-4943-8	BES23-48 0.5'	Total/NA	Solid	Total BTEX	
890-4943-9	BES23-49 0.5'	Total/NA	Solid	Total BTEX	
890-4943-10	BES23-50 0.5'	Total/NA	Solid	Total BTEX	
890-4943-11	BES23-51 0.5'	Total/NA	Solid	Total BTEX	
890-4943-12	BES23-52 0.5'	Total/NA	Solid	Total BTEX	
890-4943-13	BES23-53 0.5'	Total/NA	Solid	Total BTEX	
890-4943-14	BES23-54 0.5'	Total/NA	Solid	Total BTEX	
890-4943-15	BES23-55 0.5'	Total/NA	Solid	Total BTEX	

GC Semi VOA

Prep Batch: 58356

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4943-1	BES23-41 0.5'	Total/NA	Solid	8015NM Prep	
890-4943-2	BES23-42 0.5'	Total/NA	Solid	8015NM Prep	
890-4943-3	BES23-43 0.5'	Total/NA	Solid	8015NM Prep	
890-4943-4	BES23-44 0.5'	Total/NA	Solid	8015NM Prep	
890-4943-5	BES23-45 0.5'	Total/NA	Solid	8015NM Prep	
890-4943-6	BES23-46 0.5'	Total/NA	Solid	8015NM Prep	
890-4943-7	BES23-47 0.5'	Total/NA	Solid	8015NM Prep	
890-4943-8	BES23-48 0.5'	Total/NA	Solid	8015NM Prep	
890-4943-9	BES23-49 0.5'	Total/NA	Solid	8015NM Prep	
890-4943-10	BES23-50 0.5'	Total/NA	Solid	8015NM Prep	
890-4943-11	BES23-51 0.5'	Total/NA	Solid	8015NM Prep	
890-4943-12	BES23-52 0.5'	Total/NA	Solid	8015NM Prep	
890-4943-13	BES23-53 0.5'	Total/NA	Solid	8015NM Prep	
890-4943-14	BES23-54 0.5'	Total/NA	Solid	8015NM Prep	
890-4943-15	BES23-55 0.5'	Total/NA	Solid	8015NM Prep	
MB 880-58356/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-58356/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-58356/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-4943-1 MS	BES23-41 0.5'	Total/NA	Solid	8015NM Prep	
890-4943-1 MSD	BES23-41 0.5'	Total/NA	Solid	8015NM Prep	

Analysis Batch: 58682

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4943-1	BES23-41 0.5'	Total/NA	Solid	8015B NM	58356
890-4943-2	BES23-42 0.5'	Total/NA	Solid	8015B NM	58356
890-4943-3	BES23-43 0.5'	Total/NA	Solid	8015B NM	58356
890-4943-4	BES23-44 0.5'	Total/NA	Solid	8015B NM	58356
890-4943-5	BES23-45 0.5'	Total/NA	Solid	8015B NM	58356
890-4943-6	BES23-46 0.5'	Total/NA	Solid	8015B NM	58356
890-4943-7	BES23-47 0.5'	Total/NA	Solid	8015B NM	58356
890-4943-8	BES23-48 0.5'	Total/NA	Solid	8015B NM	58356

QC Association Summary

Client: Vertex
Project/Site: Corral Fly

Job ID: 890-4943-1

GC Semi VOA (Continued)

Analysis Batch: 58682 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4943-9	BES23-49 0.5'	Total/NA	Solid	8015B NM	58356
890-4943-10	BES23-50 0.5'	Total/NA	Solid	8015B NM	58356
890-4943-11	BES23-51 0.5'	Total/NA	Solid	8015B NM	58356
890-4943-12	BES23-52 0.5'	Total/NA	Solid	8015B NM	58356
890-4943-13	BES23-53 0.5'	Total/NA	Solid	8015B NM	58356
890-4943-14	BES23-54 0.5'	Total/NA	Solid	8015B NM	58356
890-4943-15	BES23-55 0.5'	Total/NA	Solid	8015B NM	58356
MB 880-58356/1-A	Method Blank	Total/NA	Solid	8015B NM	58356
LCS 880-58356/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	58356
LCSD 880-58356/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	58356
890-4943-1 MS	BES23-41 0.5'	Total/NA	Solid	8015B NM	58356
890-4943-1 MSD	BES23-41 0.5'	Total/NA	Solid	8015B NM	58356

Analysis Batch: 58923

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4943-1	BES23-41 0.5'	Total/NA	Solid	8015 NM	
890-4943-2	BES23-42 0.5'	Total/NA	Solid	8015 NM	
890-4943-3	BES23-43 0.5'	Total/NA	Solid	8015 NM	
890-4943-4	BES23-44 0.5'	Total/NA	Solid	8015 NM	
890-4943-5	BES23-45 0.5'	Total/NA	Solid	8015 NM	
890-4943-6	BES23-46 0.5'	Total/NA	Solid	8015 NM	
890-4943-7	BES23-47 0.5'	Total/NA	Solid	8015 NM	
890-4943-8	BES23-48 0.5'	Total/NA	Solid	8015 NM	
890-4943-9	BES23-49 0.5'	Total/NA	Solid	8015 NM	
890-4943-10	BES23-50 0.5'	Total/NA	Solid	8015 NM	
890-4943-11	BES23-51 0.5'	Total/NA	Solid	8015 NM	
890-4943-12	BES23-52 0.5'	Total/NA	Solid	8015 NM	
890-4943-13	BES23-53 0.5'	Total/NA	Solid	8015 NM	
890-4943-14	BES23-54 0.5'	Total/NA	Solid	8015 NM	
890-4943-15	BES23-55 0.5'	Total/NA	Solid	8015 NM	

HPLC/IC

Leach Batch: 57836

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4943-1	BES23-41 0.5'	Soluble	Solid	DI Leach	
890-4943-2	BES23-42 0.5'	Soluble	Solid	DI Leach	
890-4943-3	BES23-43 0.5'	Soluble	Solid	DI Leach	
890-4943-4	BES23-44 0.5'	Soluble	Solid	DI Leach	
890-4943-5	BES23-45 0.5'	Soluble	Solid	DI Leach	
890-4943-6	BES23-46 0.5'	Soluble	Solid	DI Leach	
890-4943-7	BES23-47 0.5'	Soluble	Solid	DI Leach	
890-4943-8	BES23-48 0.5'	Soluble	Solid	DI Leach	
890-4943-9	BES23-49 0.5'	Soluble	Solid	DI Leach	
890-4943-10	BES23-50 0.5'	Soluble	Solid	DI Leach	
890-4943-11	BES23-51 0.5'	Soluble	Solid	DI Leach	
890-4943-12	BES23-52 0.5'	Soluble	Solid	DI Leach	
890-4943-13	BES23-53 0.5'	Soluble	Solid	DI Leach	
890-4943-14	BES23-54 0.5'	Soluble	Solid	DI Leach	
890-4943-15	BES23-55 0.5'	Soluble	Solid	DI Leach	
MB 880-57836/1-A	Method Blank	Soluble	Solid	DI Leach	

QC Association Summary

Client: Vertex
Project/Site: Corral Fly

Job ID: 890-4943-1

HPLC/IC (Continued)

Leach Batch: 57836 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 880-57836/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-57836/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-4943-1 MS	BES23-41 0.5'	Soluble	Solid	DI Leach	
890-4943-1 MSD	BES23-41 0.5'	Soluble	Solid	DI Leach	
890-4943-11 MS	BES23-51 0.5'	Soluble	Solid	DI Leach	
890-4943-11 MSD	BES23-51 0.5'	Soluble	Solid	DI Leach	

Analysis Batch: 57909

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4943-1	BES23-41 0.5'	Soluble	Solid	300.0	57836
890-4943-2	BES23-42 0.5'	Soluble	Solid	300.0	57836
890-4943-3	BES23-43 0.5'	Soluble	Solid	300.0	57836
890-4943-4	BES23-44 0.5'	Soluble	Solid	300.0	57836
890-4943-5	BES23-45 0.5'	Soluble	Solid	300.0	57836
890-4943-6	BES23-46 0.5'	Soluble	Solid	300.0	57836
890-4943-7	BES23-47 0.5'	Soluble	Solid	300.0	57836
890-4943-8	BES23-48 0.5'	Soluble	Solid	300.0	57836
890-4943-9	BES23-49 0.5'	Soluble	Solid	300.0	57836
890-4943-10	BES23-50 0.5'	Soluble	Solid	300.0	57836
890-4943-11	BES23-51 0.5'	Soluble	Solid	300.0	57836
890-4943-12	BES23-52 0.5'	Soluble	Solid	300.0	57836
890-4943-13	BES23-53 0.5'	Soluble	Solid	300.0	57836
890-4943-14	BES23-54 0.5'	Soluble	Solid	300.0	57836
890-4943-15	BES23-55 0.5'	Soluble	Solid	300.0	57836
MB 880-57836/1-A	Method Blank	Soluble	Solid	300.0	57836
LCS 880-57836/2-A	Lab Control Sample	Soluble	Solid	300.0	57836
LCSD 880-57836/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	57836
890-4943-1 MS	BES23-41 0.5'	Soluble	Solid	300.0	57836
890-4943-1 MSD	BES23-41 0.5'	Soluble	Solid	300.0	57836
890-4943-11 MS	BES23-51 0.5'	Soluble	Solid	300.0	57836
890-4943-11 MSD	BES23-51 0.5'	Soluble	Solid	300.0	57836

Lab Chronicle

Client: Vertex
Project/Site: Corral Fly

Job ID: 890-4943-1

Client Sample ID: BES23-41 0.5'

Lab Sample ID: 890-4943-1
Matrix: Solid
Date Collected: 07/13/23 10:00
Date Received: 07/13/23 16:18

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	57841	07/17/23 13:15	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	57773	07/17/23 22:21	SM	EET MID
Total/NA	Analysis	Total BTEX		1			57930	07/18/23 10:23	SM	EET MID
Total/NA	Analysis	8015 NM		1			58923	07/31/23 16:05	AJ	EET MID
Total/NA	Prep	8015NM Prep			9.94 g	10 mL	58356	07/24/23 12:58	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	58682	07/28/23 10:52	AJ	EET MID
Soluble	Leach	DI Leach			4.99 g	50 mL	57836	07/17/23 11:13	KS	EET MID
Soluble	Analysis	300.0		5			57909	07/17/23 18:10	CH	EET MID

Client Sample ID: BES23-42 0.5'

Lab Sample ID: 890-4943-2
Matrix: Solid
Date Collected: 07/13/23 10:05
Date Received: 07/13/23 16:18

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	57841	07/17/23 13:15	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	57773	07/17/23 22:42	SM	EET MID
Total/NA	Analysis	Total BTEX		1			57930	07/18/23 10:23	SM	EET MID
Total/NA	Analysis	8015 NM		1			58923	07/31/23 16:05	AJ	EET MID
Total/NA	Prep	8015NM Prep			9.97 g	10 mL	58356	07/24/23 12:58	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	58682	07/28/23 11:59	AJ	EET MID
Soluble	Leach	DI Leach			5.02 g	50 mL	57836	07/17/23 11:13	KS	EET MID
Soluble	Analysis	300.0		20			57909	07/17/23 18:25	CH	EET MID

Client Sample ID: BES23-43 0.5'

Lab Sample ID: 890-4943-3
Matrix: Solid
Date Collected: 07/13/23 10:10
Date Received: 07/13/23 16:18

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	57841	07/17/23 13:15	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	57773	07/17/23 23:03	SM	EET MID
Total/NA	Analysis	Total BTEX		1			57930	07/18/23 10:23	SM	EET MID
Total/NA	Analysis	8015 NM		1			58923	07/31/23 16:05	AJ	EET MID
Total/NA	Prep	8015NM Prep			10.07 g	10 mL	58356	07/24/23 12:58	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	58682	07/28/23 12:21	AJ	EET MID
Soluble	Leach	DI Leach			5.03 g	50 mL	57836	07/17/23 11:13	KS	EET MID
Soluble	Analysis	300.0		10			57909	07/17/23 18:30	CH	EET MID

Client Sample ID: BES23-44 0.5'

Lab Sample ID: 890-4943-4
Matrix: Solid
Date Collected: 07/13/23 10:15
Date Received: 07/13/23 16:18

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	57841	07/17/23 13:15	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	57773	07/17/23 23:23	SM	EET MID
Total/NA	Analysis	Total BTEX		1			57930	07/18/23 10:23	SM	EET MID

Lab Chronicle

Client: Vertex
Project/Site: Corral Fly

Job ID: 890-4943-1

Client Sample ID: BES23-44 0.5'

Lab Sample ID: 890-4943-4
Matrix: Solid
Date Collected: 07/13/23 10:15
Date Received: 07/13/23 16:18

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			58923	07/31/23 16:05	AJ	EET MID
Total/NA	Prep	8015NM Prep			10.09 g	10 mL	58356	07/24/23 12:58	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	58682	07/28/23 12:44	AJ	EET MID
Soluble	Leach	DI Leach			4.98 g	50 mL	57836	07/17/23 11:13	KS	EET MID
Soluble	Analysis	300.0		10			57909	07/17/23 18:35	CH	EET MID

Client Sample ID: BES23-45 0.5'

Lab Sample ID: 890-4943-5
Matrix: Solid
Date Collected: 07/13/23 10:20
Date Received: 07/13/23 16:18

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	57841	07/17/23 13:15	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	57773	07/17/23 23:44	SM	EET MID
Total/NA	Analysis	Total BTEX		1			57930	07/18/23 10:23	SM	EET MID
Total/NA	Analysis	8015 NM		1			58923	07/31/23 16:05	AJ	EET MID
Total/NA	Prep	8015NM Prep			10.10 g	10 mL	58356	07/24/23 12:58	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	58682	07/28/23 13:06	AJ	EET MID
Soluble	Leach	DI Leach			5.05 g	50 mL	57836	07/17/23 11:13	KS	EET MID
Soluble	Analysis	300.0		5			57909	07/17/23 18:40	CH	EET MID

Client Sample ID: BES23-46 0.5'

Lab Sample ID: 890-4943-6
Matrix: Solid
Date Collected: 07/13/23 10:25
Date Received: 07/13/23 16:18

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	57841	07/17/23 13:15	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	57773	07/18/23 00:05	SM	EET MID
Total/NA	Analysis	Total BTEX		1			57930	07/18/23 10:23	SM	EET MID
Total/NA	Analysis	8015 NM		1			58923	07/31/23 16:05	AJ	EET MID
Total/NA	Prep	8015NM Prep			9.91 g	10 mL	58356	07/24/23 12:58	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	58682	07/28/23 13:28	AJ	EET MID
Soluble	Leach	DI Leach			4.96 g	50 mL	57836	07/17/23 11:13	KS	EET MID
Soluble	Analysis	300.0		5			57909	07/17/23 18:55	CH	EET MID

Client Sample ID: BES23-47 0.5'

Lab Sample ID: 890-4943-7
Matrix: Solid
Date Collected: 07/13/23 10:30
Date Received: 07/13/23 16:18

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	57841	07/17/23 13:15	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	57773	07/18/23 00:25	SM	EET MID
Total/NA	Analysis	Total BTEX		1			57930	07/18/23 10:23	SM	EET MID
Total/NA	Analysis	8015 NM		1			58923	07/31/23 16:05	AJ	EET MID
Total/NA	Prep	8015NM Prep			9.90 g	10 mL	58356	07/24/23 12:58	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	58682	07/28/23 13:50	AJ	EET MID

Lab Chronicle

Client: Vertex
Project/Site: Corral Fly

Job ID: 890-4943-1

Client Sample ID: BES23-47 0.5'

Lab Sample ID: 890-4943-7
Matrix: Solid
Date Collected: 07/13/23 10:30
Date Received: 07/13/23 16:18

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	57836	07/17/23 11:13	KS	EET MID
Soluble	Analysis	300.0		5			57909	07/17/23 19:00	CH	EET MID

Client Sample ID: BES23-48 0.5'

Lab Sample ID: 890-4943-8
Matrix: Solid
Date Collected: 07/13/23 10:35
Date Received: 07/13/23 16:18

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	57841	07/17/23 13:15	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	57773	07/18/23 00:46	SM	EET MID
Total/NA	Analysis	Total BTEX		1			57930	07/18/23 10:23	SM	EET MID
Total/NA	Analysis	8015 NM		1			58923	07/31/23 16:05	AJ	EET MID
Total/NA	Prep	8015NM Prep			9.93 g	10 mL	58356	07/24/23 12:58	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	58682	07/28/23 14:13	AJ	EET MID
Soluble	Leach	DI Leach			5.02 g	50 mL	57836	07/17/23 11:13	KS	EET MID
Soluble	Analysis	300.0		5			57909	07/17/23 19:05	CH	EET MID

Client Sample ID: BES23-49 0.5'

Lab Sample ID: 890-4943-9
Matrix: Solid
Date Collected: 07/13/23 10:40
Date Received: 07/13/23 16:18

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.00 g	5 mL	57841	07/17/23 13:15	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	57773	07/18/23 01:06	SM	EET MID
Total/NA	Analysis	Total BTEX		1			57930	07/18/23 10:23	SM	EET MID
Total/NA	Analysis	8015 NM		1			58923	07/31/23 16:05	AJ	EET MID
Total/NA	Prep	8015NM Prep			9.95 g	10 mL	58356	07/24/23 12:58	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	58682	07/28/23 14:35	AJ	EET MID
Soluble	Leach	DI Leach			5.04 g	50 mL	57836	07/17/23 11:13	KS	EET MID
Soluble	Analysis	300.0		5			57909	07/17/23 19:10	CH	EET MID

Client Sample ID: BES23-50 0.5'

Lab Sample ID: 890-4943-10
Matrix: Solid
Date Collected: 07/13/23 10:45
Date Received: 07/13/23 16:18

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	57841	07/17/23 13:15	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	57773	07/18/23 01:27	SM	EET MID
Total/NA	Analysis	Total BTEX		1			57930	07/18/23 10:23	SM	EET MID
Total/NA	Analysis	8015 NM		1			58923	07/31/23 16:05	AJ	EET MID
Total/NA	Prep	8015NM Prep			10.07 g	10 mL	58356	07/24/23 12:58	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	58682	07/28/23 14:57	AJ	EET MID
Soluble	Leach	DI Leach			4.98 g	50 mL	57836	07/17/23 11:13	KS	EET MID
Soluble	Analysis	300.0		5			57909	07/17/23 19:15	CH	EET MID

Lab Chronicle

Client: Vertex
Project/Site: Corral Fly

Job ID: 890-4943-1

Client Sample ID: BES23-51 0.5'

Lab Sample ID: 890-4943-11
Matrix: Solid
Date Collected: 07/13/23 10:50
Date Received: 07/13/23 16:18

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	57841	07/17/23 13:15	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	57773	07/18/23 02:49	SM	EET MID
Total/NA	Analysis	Total BTEX		1			57930	07/18/23 10:23	SM	EET MID
Total/NA	Analysis	8015 NM		1			58923	07/31/23 16:05	AJ	EET MID
Total/NA	Prep	8015NM Prep			10.09 g	10 mL	58356	07/24/23 12:58	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	58682	07/28/23 15:41	AJ	EET MID
Soluble	Leach	DI Leach			5.03 g	50 mL	57836	07/17/23 11:13	KS	EET MID
Soluble	Analysis	300.0		1			57909	07/18/23 11:15	CH	EET MID

Client Sample ID: BES23-52 0.5'

Lab Sample ID: 890-4943-12
Matrix: Solid
Date Collected: 07/13/23 10:55
Date Received: 07/13/23 16:18

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	57841	07/17/23 13:15	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	57773	07/18/23 03:10	SM	EET MID
Total/NA	Analysis	Total BTEX		1			57930	07/18/23 10:23	SM	EET MID
Total/NA	Analysis	8015 NM		1			58923	07/31/23 16:05	AJ	EET MID
Total/NA	Prep	8015NM Prep			10.04 g	10 mL	58356	07/24/23 12:58	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	58682	07/28/23 16:03	AJ	EET MID
Soluble	Leach	DI Leach			5 g	50 mL	57836	07/17/23 11:13	KS	EET MID
Soluble	Analysis	300.0		1			57909	07/17/23 19:34	CH	EET MID

Client Sample ID: BES23-53 0.5'

Lab Sample ID: 890-4943-13
Matrix: Solid
Date Collected: 07/13/23 11:00
Date Received: 07/13/23 16:18

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	57841	07/17/23 13:15	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	57773	07/18/23 03:31	SM	EET MID
Total/NA	Analysis	Total BTEX		1			57930	07/18/23 10:23	SM	EET MID
Total/NA	Analysis	8015 NM		1			58923	07/31/23 16:05	AJ	EET MID
Total/NA	Prep	8015NM Prep			10.00 g	10 mL	58356	07/24/23 12:58	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	58682	07/28/23 16:26	AJ	EET MID
Soluble	Leach	DI Leach			5.01 g	50 mL	57836	07/17/23 11:13	KS	EET MID
Soluble	Analysis	300.0		1			57909	07/17/23 19:39	CH	EET MID

Client Sample ID: BES23-54 0.5'

Lab Sample ID: 890-4943-14
Matrix: Solid
Date Collected: 07/13/23 11:05
Date Received: 07/13/23 16:18

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	57841	07/17/23 13:15	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	57773	07/18/23 03:51	SM	EET MID
Total/NA	Analysis	Total BTEX		1			57930	07/18/23 10:23	SM	EET MID

Lab Chronicle

Client: Vertex
Project/Site: Corral Fly

Job ID: 890-4943-1

Client Sample ID: BES23-54 0.5'

Lab Sample ID: 890-4943-14

Date Collected: 07/13/23 11:05
Matrix: Solid
Date Received: 07/13/23 16:18

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			58923	07/31/23 16:05	AJ	EET MID
Total/NA	Prep	8015NM Prep			9.94 g	10 mL	58356	07/24/23 12:58	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	58682	07/28/23 16:48	AJ	EET MID
Soluble	Leach	DI Leach			4.99 g	50 mL	57836	07/17/23 11:13	KS	EET MID
Soluble	Analysis	300.0		1			57909	07/17/23 19:54	CH	EET MID

Client Sample ID: BES23-55 0.5'

Lab Sample ID: 890-4943-15

Date Collected: 07/13/23 11:10
Matrix: Solid
Date Received: 07/13/23 16:18

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.00 g	5 mL	57841	07/17/23 13:15	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	57773	07/18/23 04:12	SM	EET MID
Total/NA	Analysis	Total BTEX		1			57930	07/18/23 10:23	SM	EET MID
Total/NA	Analysis	8015 NM		1			58923	07/31/23 16:05	AJ	EET MID
Total/NA	Prep	8015NM Prep			9.93 g	10 mL	58356	07/24/23 12:58	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	58682	07/28/23 17:10	AJ	EET MID
Soluble	Leach	DI Leach			4.97 g	50 mL	57836	07/17/23 11:13	KS	EET MID
Soluble	Analysis	300.0		10			57909	07/17/23 19:59	CH	EET MID

Laboratory References:

EET MID = Eurofins Midland, 1211 W. Florida Ave, Midland, TX 79701, TEL (432)704-5440

Accreditation/Certification Summary

Client: Vertex
Project/Site: Corral Fly

Job ID: 890-4943-1

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	T104704400-23-26	06-30-24

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: Vertex
Project/Site: Corral Fly

Job ID: 890-4943-1

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	EPA	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

EPA = US Environmental Protection Agency

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: Vertex
Project/Site: Corral Fly

Job ID: 890-4943-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-4943-1	BES23-41 0.5'	Solid	07/13/23 10:00	07/13/23 16:18	0.5
890-4943-2	BES23-42 0.5'	Solid	07/13/23 10:05	07/13/23 16:18	0.5
890-4943-3	BES23-43 0.5'	Solid	07/13/23 10:10	07/13/23 16:18	0.5
890-4943-4	BES23-44 0.5'	Solid	07/13/23 10:15	07/13/23 16:18	0.5
890-4943-5	BES23-45 0.5'	Solid	07/13/23 10:20	07/13/23 16:18	0.5
890-4943-6	BES23-46 0.5'	Solid	07/13/23 10:25	07/13/23 16:18	0.5
890-4943-7	BES23-47 0.5'	Solid	07/13/23 10:30	07/13/23 16:18	0.5
890-4943-8	BES23-48 0.5'	Solid	07/13/23 10:35	07/13/23 16:18	0.5
890-4943-9	BES23-49 0.5'	Solid	07/13/23 10:40	07/13/23 16:18	0.5
890-4943-10	BES23-50 0.5'	Solid	07/13/23 10:45	07/13/23 16:18	0.5
890-4943-11	BES23-51 0.5'	Solid	07/13/23 10:50	07/13/23 16:18	0.5
890-4943-12	BES23-52 0.5'	Solid	07/13/23 10:55	07/13/23 16:18	0.5
890-4943-13	BES23-53 0.5'	Solid	07/13/23 11:00	07/13/23 16:18	0.5
890-4943-14	BES23-54 0.5'	Solid	07/13/23 11:05	07/13/23 16:18	0.5
890-4943-15	BES23-55 0.5'	Solid	07/13/23 11:10	07/13/23 16:18	0.5

Released to Imaging: 7/26/2024 3:59:45 PM
Received by OCD: 7/24/2024 3:24:20 PM

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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: _____

www.xenco.com Page 1 of 2

Project Manager:	Chance Dixon	Bill to: (if different)	Rob Kirk
Company Name:	Vertex	Company Name:	Solaris
Address:		Address:	
City, State ZIP:		City, State ZIP:	
Phone:	Email:	cdixon@vertex.ca	

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:	Corral Fly	Turn Around	☒ Routine ☐ Rush
Project Number:		Due Date:	
Project Location:		TAT starts the day received by the lab, if received by 4:30pm	
Sampler's Name:	Hunter Klein		
PO #:			

SAMPLE RECEIPT			
Temp Blank:	Yes (No)	Wet Ice:	(Yes) No
Samples Received Intact:	(Yes) No	Thermometer ID:	NM007
Cooler Custody Seals:	Yes No (N/A)	Correction Factor:	-0.2
Sample Custody Seals:	Yes No (N/A)	Temperature Reading:	15.2
Total Containers:		Corrected Temperature:	15.0

ANALYSIS REQUEST

Pres. Code / Parameters: TPH, BTEX, Cl

890-4943 Chain of Custody

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

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Grab/ Comp	# of Cont	Sample Comments
BES23-41 0.5'	Soil	7/13/23	10:00			5	
BES23-42 0.5'			10:05				
BES23-43 0.5'			10:10				
BES23-44 0.5'			10:15				
BES23-45 0.5'			10:20				
BES23-46 0.5'			10:25				
BES23-47 0.5'			10:30				
BES23-48 0.5'			10:35				
BES23-49 0.5'			10:40				
BES23-50 0.5'			10:45				

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 Hunter Klein	Joe Wy	7-13-23 1618	4		
3			6		
5					

Revised Date: 08/25/2020 Rev. 2020.2

Released to Imaging: 7/26/2024 3:59:45 PM
Received by OCD: 7/24/2024 3:24:20 PM

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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: _____

www.xenco.com Page 2 of 2

Project Manager:	Chance Dixon	Bill to: (if different)	Rob Kirk
Company Name:	Vertex	Company Name:	Solaris
Address:		Address:	
City, State ZIP:		City, State ZIP:	
Phone:	Email:	cdixon@vertex.ca	

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:	Corral Fly	Turn Around	☒ Routine ☐ Rush
Project Number:		Due Date:	
Project Location:		TAT starts the day received by the lab, if received by 4:30pm	
Sampler's Name:	Hunter Klein		
PO #:			

SAMPLE RECEIPT				
Temp Blank:	Yes No	Wet Ice:	Yes No	
Samples Received Intact:	Yes No	Thermometer ID:		
Cooler Custody Seals:	Yes No N/A	Correction Factor:		
Sample Custody Seals:	Yes No N/A	Temperature Reading:		
Total Containers:		Corrected Temperature:		

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

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Grab/ Comp	# of Cont	Parameters: TPH	BTEX	Cl	Sample Comments
BES23-51 0.5'	Soil	7/13/23	10:50			5	X	X	X	
BES23-52 0.5'			10:55							
BES23-53 0.5'			11:00							
BES23-54 0.5'			11:05							
BES23-55 0.5'			11:10				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

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	Hunter Klein		7.13.23 16:18	4		
3				6		
5						

Revised Date: 08/25/2020 Rev. 2020.2

Login Sample Receipt Checklist

Client: Vertex Job Number: 890-4943-1

Login Number: 4943 **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: Vertex

Job Number: 890-4943-1

Login Number: 4943
List Number: 2
Creator: Rodriguez, Leticia

List Source: Eurofins Midland
List Creation: 07/17/23 10:06 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	

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ANALYTICAL REPORT

PREPARED FOR

Attn: Chance Dixon
Vertex
3101 Boyd Dr
Carlsbad, New Mexico 88220

Generated 7/31/2023 3:24:18 PM

JOB DESCRIPTION

Corral Fly
SDG NUMBER 23E-02502

JOB NUMBER

890-4951-1

Eurofins Carlsbad
1089 N Canal St.
Carlsbad NM 88220

See page two for job notes and contact information.

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my EOL

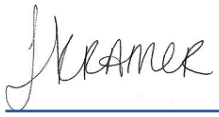
Eurofins Carlsbad

Job Notes

This report may not be reproduced except in full, and with written approval from the laboratory. The results relate only to the samples tested. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

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



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Authorized for release by
Jessica Kramer, Project Manager
Jessica.Kramer@et.eurofinsus.com
(432)704-5440

Client: Vertex
Project/Site: Corral Fly

Laboratory Job ID: 890-4951-1
SDG: 23E-02502

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Eurofins Carlsbad
7/31/2023

Definitions/Glossary

Client: Vertex
Project/Site: Corral Fly

Job ID: 890-4951-1
SDG: 23E-02502

Qualifiers

GC VOA

Qualifier	Qualifier Description
*-	LCS and/or LCSD is outside acceptance limits, low biased.
*1	LCS/LCSD RPD exceeds control limits.
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.

GC Semi VOA

Qualifier	Qualifier Description
S1+	Surrogate recovery exceeds control limits, high 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: Vertex
Project/Site: Corral Fly

Job ID: 890-4951-1
SDG: 23E-02502

Job ID: 890-4951-1

Laboratory: Eurofins Carlsbad

Narrative

Job Narrative
890-4951-1

Receipt
The samples were received on 7/14/2023 3:02 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 11.0°C

Receipt Exceptions
The following samples were received and analyzed from an unpreserved bulk soil jar: BES23-56 0.5' (890-4951-1), BES23-57 0.5' (890-4951-2), BES23-58 0.5' (890-4951-3), BES23-59 0.5' (890-4951-4), BES23-60 0.5' (890-4951-5), BES23-61 0.5' (890-4951-6), BES23-62 0.5' (890-4951-7), BES23-63 0.5' (890-4951-8), BES23-64 0.5' (890-4951-9), WES23-01 0.5' (890-4951-10), WES23-02 0.5' (890-4951-11), WES23-03 0.5' (890-4951-12), WES23-04 0.5' (890-4951-13), WES23-05 0.5' (890-4951-14) and WES23-06 0.5' (890-4951-15).

GC VOA
Method 8021B: LCSD biased low. Since only an acceptable LCS is required per the method, the data has been qualified and reported. (LCSD 880-58151/2-A)

Method 8021B: The matrix spike (MS) recoveries for preparation batch 880-58151 and analytical batch 880-58250 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 samples were outside control limits: (890-4951-A-1-B MS) and (890-4951-A-1-C MSD). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8021B: The continuing calibration verification (CCV) associated with batch 880-58285 recovered above the upper control limit for m-Xylene & p-Xylene. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. The associated sample is impacted: (CCV 880-58285/2).

Method 8021B: The matrix spike (MS) recoveries for preparation batch 880-58056 and analytical batch 880-58285 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 CCV was biased low for gasoline range hydrocarbons. Another CCV was analyzed and acceptable within 12 hours; therefore, the data was qualified and reported.(CCV 880-58792/20)

Method 8015MOD_NM: Surrogate recovery for the following samples were outside control limits: BES23-58 0.5' (890-4951-3), WES23-05 0.5' (890-4951-14), (MB 880-58406/1-A) and (890-4950-A-41-D). Evidence of matrix interferences is not obvious.

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

HPLC/IC
Method 300_ORGFM_28D: The matrix spike / matrix spike duplicate (MS/MSD) recoveries and precision for preparation batch 880-57875 and analytical batch 880-58007 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample / laboratory sample control duplicate (LCS/LCSD) precision was within acceptance limits.

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

Client Sample Results

Client: Vertex
Project/Site: Corral Fly

Job ID: 890-4951-1
SDG: 23E-02502

Client Sample ID: BES23-56 0.5'

Date Collected: 07/14/23 10:00
Date Received: 07/14/23 15:02
Sample Depth: 0.5

Lab Sample ID: 890-4951-1
Matrix: Solid

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00202	U F1	0.00202		mg/Kg		07/19/23 15:10	07/24/23 02:10	1
Ethylbenzene	<0.00202	U	0.00202		mg/Kg		07/19/23 15:10	07/24/23 02:10	1
Toluene	<0.00202	U F1	0.00202		mg/Kg		07/19/23 15:10	07/24/23 02:10	1
Xylenes, Total	<0.00404	U	0.00404		mg/Kg		07/19/23 15:10	07/24/23 02:10	1
m-Xylene & p-Xylene	<0.00404	U	0.00404		mg/Kg		07/19/23 15:10	07/24/23 02:10	1
o-Xylene	<0.00202	U	0.00202		mg/Kg		07/19/23 15:10	07/24/23 02:10	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*83*		*70 - 130*	*07/19/23 15:10*	*07/24/23 02:10*	*1*
1,4-Difluorobenzene (Surr)	*94*		*70 - 130*	*07/19/23 15:10*	*07/24/23 02:10*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00404	U	0.00404		mg/Kg			07/24/23 11:25	1

Method: SW846 8015 NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**87.0**		50.1		mg/Kg			07/31/23 16:01	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	<50.1	U	50.1		mg/Kg		07/24/23 17:37	07/30/23 16:04	1
Diesel Range Organics (Over C10-C28)	**87.0**		50.1		mg/Kg		07/24/23 17:37	07/30/23 16:04	1
OII Range Organics (Over C28-C36)	<50.1	U	50.1		mg/Kg		07/24/23 17:37	07/30/23 16:04	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*116*		*70 - 130*	*07/24/23 17:37*	*07/30/23 16:04*	*1*
o-Terphenyl	*106*		*70 - 130*	*07/24/23 17:37*	*07/30/23 16:04*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**986**		25.0		mg/Kg			07/19/23 10:31	5

Client Sample ID: BES23-57 0.5'

Date Collected: 07/14/23 10:05
Date Received: 07/14/23 15:02
Sample Depth: 0.5

Lab Sample ID: 890-4951-2
Matrix: Solid

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		07/19/23 15:10	07/24/23 02:31	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		07/19/23 15:10	07/24/23 02:31	1
Toluene	<0.00200	U	0.00200		mg/Kg		07/19/23 15:10	07/24/23 02:31	1
Xylenes, Total	<0.00401	U	0.00401		mg/Kg		07/19/23 15:10	07/24/23 02:31	1
m-Xylene & p-Xylene	<0.00401	U	0.00401		mg/Kg		07/19/23 15:10	07/24/23 02:31	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		07/19/23 15:10	07/24/23 02:31	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*90*		*70 - 130*	*07/19/23 15:10*	*07/24/23 02:31*	*1*

Client Sample Results

Client: Vertex
Project/Site: Corral Fly

Job ID: 890-4951-1
SDG: 23E-02502

Client Sample ID: BES23-57 0.5'

Lab Sample ID: 890-4951-2
Matrix: Solid
Date Collected: 07/14/23 10:05
Date Received: 07/14/23 15:02
Sample Depth: 0.5

Method: SW846 8021B - Volatile Organic Compounds (GC) (Continued)

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,4-Difluorobenzene (Surr)	*103*		*70 - 130*	*07/19/23 15:10*	*07/24/23 02:31*	*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			07/24/23 11:25	1

Method: SW846 8015 NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.3	U	50.3		mg/Kg			07/31/23 16:01	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	<50.3	U	50.3		mg/Kg		07/24/23 17:37	07/30/23 16:26	1
Diesel Range Organics (Over C10-C28)	<50.3	U	50.3		mg/Kg		07/24/23 17:37	07/30/23 16:26	1
OII Range Organics (Over C28-C36)	<50.3	U	50.3		mg/Kg		07/24/23 17:37	07/30/23 16:26	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	*116*		*70 - 130*	*07/24/23 17:37*	*07/30/23 16:26*	*1*
o-Terphenyl	*111*		*70 - 130*	*07/24/23 17:37*	*07/30/23 16:26*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**544**		49.6		mg/Kg			07/19/23 10:36	10

Client Sample ID: BES23-58 0.5'

Lab Sample ID: 890-4951-3
Matrix: Solid
Date Collected: 07/14/23 10:10
Date Received: 07/14/23 15:02
Sample Depth: 0.5

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		07/19/23 15:10	07/24/23 02:51	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		07/19/23 15:10	07/24/23 02:51	1
Toluene	<0.00200	U	0.00200		mg/Kg		07/19/23 15:10	07/24/23 02:51	1
Xylenes, Total	<0.00399	U	0.00399		mg/Kg		07/19/23 15:10	07/24/23 02:51	1
m-Xylene & p-Xylene	<0.00399	U	0.00399		mg/Kg		07/19/23 15:10	07/24/23 02:51	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		07/19/23 15:10	07/24/23 02:51	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	*89*		*70 - 130*	*07/19/23 15:10*	*07/24/23 02:51*	*1*
1,4-Difluorobenzene (Surr)	*99*		*70 - 130*	*07/19/23 15:10*	*07/24/23 02:51*	*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			07/24/23 11:25	1

Method: SW846 8015 NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**60.5**		49.9		mg/Kg			07/31/23 16:01	1

Client Sample Results

Client: Vertex
Project/Site: Corral Fly

Job ID: 890-4951-1
SDG: 23E-02502

Client Sample ID: BES23-58 0.5'

Lab Sample ID: 890-4951-3
Matrix: Solid
Date Collected: 07/14/23 10:10
Date Received: 07/14/23 15:02
Sample Depth: 0.5

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		07/24/23 17:37	07/30/23 16:48	1
Diesel Range Organics (Over C10-C28)	**60.5**		49.9		mg/Kg		07/24/23 17:37	07/30/23 16:48	1
OII Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		07/24/23 17:37	07/30/23 16:48	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*136*	*S1+*	*70 - 130*	*07/24/23 17:37*	*07/30/23 16:48*	*1*
o-Terphenyl	*129*		*70 - 130*	*07/24/23 17:37*	*07/30/23 16:48*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**2900**		50.5		mg/Kg			07/19/23 10:41	10

Client Sample ID: BES23-59 0.5'

Lab Sample ID: 890-4951-4
Matrix: Solid
Date Collected: 07/14/23 10:15
Date Received: 07/14/23 15:02
Sample Depth: 0.5

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00198	U	0.00198		mg/Kg		07/19/23 15:10	07/24/23 03:12	1
Ethylbenzene	<0.00198	U	0.00198		mg/Kg		07/19/23 15:10	07/24/23 03:12	1
Toluene	<0.00198	U	0.00198		mg/Kg		07/19/23 15:10	07/24/23 03:12	1
Xylenes, Total	<0.00397	U	0.00397		mg/Kg		07/19/23 15:10	07/24/23 03:12	1
m-Xylene & p-Xylene	<0.00397	U	0.00397		mg/Kg		07/19/23 15:10	07/24/23 03:12	1
o-Xylene	<0.00198	U	0.00198		mg/Kg		07/19/23 15:10	07/24/23 03:12	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*89*		*70 - 130*	*07/19/23 15:10*	*07/24/23 03:12*	*1*
1,4-Difluorobenzene (Surr)	*106*		*70 - 130*	*07/19/23 15:10*	*07/24/23 03:12*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00397	U	0.00397		mg/Kg			07/24/23 11:25	1

Method: SW846 8015 NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**73.0**		50.1		mg/Kg			07/31/23 16:01	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	<50.1	U	50.1		mg/Kg		07/24/23 17:37	07/30/23 17:10	1
Diesel Range Organics (Over C10-C28)	**73.0**		50.1		mg/Kg		07/24/23 17:37	07/30/23 17:10	1
OII Range Organics (Over C28-C36)	<50.1	U	50.1		mg/Kg		07/24/23 17:37	07/30/23 17:10	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*114*		*70 - 130*	*07/24/23 17:37*	*07/30/23 17:10*	*1*
o-Terphenyl	*105*		*70 - 130*	*07/24/23 17:37*	*07/30/23 17:10*	*1*

Client Sample Results

Client: Vertex
Project/Site: Corral Fly

Job ID: 890-4951-1
SDG: 23E-02502

Client Sample ID: BES23-59 0.5'

Lab Sample ID: 890-4951-4
Matrix: Solid
Date Collected: 07/14/23 10:15
Date Received: 07/14/23 15:02
Sample Depth: 0.5

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**3040**		50.2		mg/Kg			07/19/23 10:46	10

Client Sample ID: BES23-60 0.5'

Lab Sample ID: 890-4951-5
Matrix: Solid
Date Collected: 07/14/23 10:20
Date Received: 07/14/23 15:02
Sample Depth: 0.5

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		07/19/23 15:10	07/24/23 03:32	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		07/19/23 15:10	07/24/23 03:32	1
Toluene	<0.00200	U	0.00200		mg/Kg		07/19/23 15:10	07/24/23 03:32	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		07/19/23 15:10	07/24/23 03:32	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		07/19/23 15:10	07/24/23 03:32	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		07/19/23 15:10	07/24/23 03:32	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*94*		*70 - 130*	*07/19/23 15:10*	*07/24/23 03:32*	*1*
1,4-Difluorobenzene (Surr)	*105*		*70 - 130*	*07/19/23 15:10*	*07/24/23 03:32*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00400	U	0.00400		mg/Kg			07/24/23 11:25	1

Method: SW846 8015 NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**182**		50.0		mg/Kg			07/31/23 16:01	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		07/24/23 17:37	07/30/23 17:32	1
Diesel Range Organics (Over C10-C28)	**182**		50.0		mg/Kg		07/24/23 17:37	07/30/23 17:32	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		07/24/23 17:37	07/30/23 17:32	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*124*		*70 - 130*	*07/24/23 17:37*	*07/30/23 17:32*	*1*
o-Terphenyl	*115*		*70 - 130*	*07/24/23 17:37*	*07/30/23 17:32*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**583**		25.1		mg/Kg			07/19/23 11:28	5

Client Sample Results

Client: Vertex
Project/Site: Corral Fly

Job ID: 890-4951-1
SDG: 23E-02502

Client Sample ID: BES23-61 0.5'

Lab Sample ID: 890-4951-6
Matrix: Solid
Date Collected: 07/14/23 10:25
Date Received: 07/14/23 15:02
Sample Depth: 0.5

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		07/19/23 15:10	07/24/23 03:53	1
Ethylbenzene	<0.00201	U	0.00201		mg/Kg		07/19/23 15:10	07/24/23 03:53	1
Toluene	<0.00201	U	0.00201		mg/Kg		07/19/23 15:10	07/24/23 03:53	1
Xylenes, Total	<0.00402	U	0.00402		mg/Kg		07/19/23 15:10	07/24/23 03:53	1
m-Xylene & p-Xylene	<0.00402	U	0.00402		mg/Kg		07/19/23 15:10	07/24/23 03:53	1
o-Xylene	<0.00201	U	0.00201		mg/Kg		07/19/23 15:10	07/24/23 03:53	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*96*		*70 - 130*	*07/19/23 15:10*	*07/24/23 03:53*	*1*
1,4-Difluorobenzene (Surr)	*97*		*70 - 130*	*07/19/23 15:10*	*07/24/23 03:53*	*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			07/24/23 11:25	1

Method: SW846 8015 NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**341**		49.5		mg/Kg			07/31/23 16:01	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	<49.5	U	49.5		mg/Kg		07/24/23 17:37	07/30/23 17:55	1
Diesel Range Organics (Over C10-C28)	**341**		49.5		mg/Kg		07/24/23 17:37	07/30/23 17:55	1
OII Range Organics (Over C28-C36)	<49.5	U	49.5		mg/Kg		07/24/23 17:37	07/30/23 17:55	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*126*		*70 - 130*	*07/24/23 17:37*	*07/30/23 17:55*	*1*
o-Terphenyl	*114*		*70 - 130*	*07/24/23 17:37*	*07/30/23 17:55*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**1540**		49.8		mg/Kg			07/19/23 11:43	10

Client Sample ID: BES23-62 0.5'

Lab Sample ID: 890-4951-7
Matrix: Solid
Date Collected: 07/14/23 10:30
Date Received: 07/14/23 15:02
Sample Depth: 0.5

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		07/19/23 15:10	07/24/23 04:13	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		07/19/23 15:10	07/24/23 04:13	1
Toluene	<0.00200	U	0.00200		mg/Kg		07/19/23 15:10	07/24/23 04:13	1
Xylenes, Total	<0.00401	U	0.00401		mg/Kg		07/19/23 15:10	07/24/23 04:13	1
m-Xylene & p-Xylene	<0.00401	U	0.00401		mg/Kg		07/19/23 15:10	07/24/23 04:13	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		07/19/23 15:10	07/24/23 04:13	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*93*		*70 - 130*	*07/19/23 15:10*	*07/24/23 04:13*	*1*

Client Sample Results

Client: Vertex
Project/Site: Corral Fly

Job ID: 890-4951-1
SDG: 23E-02502

Client Sample ID: BES23-62 0.5'

Lab Sample ID: 890-4951-7
Matrix: Solid
Date Collected: 07/14/23 10:30
Date Received: 07/14/23 15:02
Sample Depth: 0.5

Method: SW846 8021B - Volatile Organic Compounds (GC) (Continued)

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Difluorobenzene (Surr)	*98*		*70 - 130*	*07/19/23 15:10*	*07/24/23 04:13*	*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			07/24/23 11:25	1

Method: SW846 8015 NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**111**		49.5		mg/Kg			07/31/23 16:01	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	<49.5	U	49.5		mg/Kg		07/24/23 17:37	07/30/23 18:17	1
Diesel Range Organics (Over C10-C28)	**111**		49.5		mg/Kg		07/24/23 17:37	07/30/23 18:17	1
OII Range Organics (Over C28-C36)	<49.5	U	49.5		mg/Kg		07/24/23 17:37	07/30/23 18:17	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*117*		*70 - 130*	*07/24/23 17:37*	*07/30/23 18:17*	*1*
o-Terphenyl	*108*		*70 - 130*	*07/24/23 17:37*	*07/30/23 18:17*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**1480**		24.9		mg/Kg			07/19/23 11:48	5

Client Sample ID: BES23-63 0.5'

Lab Sample ID: 890-4951-8
Matrix: Solid
Date Collected: 07/14/23 10:35
Date Received: 07/14/23 15:02
Sample Depth: 0.5

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		07/19/23 15:10	07/24/23 04:33	1
Ethylbenzene	<0.00201	U	0.00201		mg/Kg		07/19/23 15:10	07/24/23 04:33	1
Toluene	<0.00201	U	0.00201		mg/Kg		07/19/23 15:10	07/24/23 04:33	1
Xylenes, Total	<0.00402	U	0.00402		mg/Kg		07/19/23 15:10	07/24/23 04:33	1
m-Xylene & p-Xylene	<0.00402	U	0.00402		mg/Kg		07/19/23 15:10	07/24/23 04:33	1
o-Xylene	<0.00201	U	0.00201		mg/Kg		07/19/23 15:10	07/24/23 04:33	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*104*		*70 - 130*	*07/19/23 15:10*	*07/24/23 04:33*	*1*
1,4-Difluorobenzene (Surr)	*100*		*70 - 130*	*07/19/23 15:10*	*07/24/23 04:33*	*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			07/24/23 11:25	1

Method: SW846 8015 NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.3	U	50.3		mg/Kg			07/31/23 16:01	1

Client Sample Results

Client: Vertex
Project/Site: Corral Fly

Job ID: 890-4951-1
SDG: 23E-02502

Client Sample ID: BES23-63 0.5'

Lab Sample ID: 890-4951-8
Matrix: Solid
Date Collected: 07/14/23 10:35
Date Received: 07/14/23 15:02
Sample Depth: 0.5

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	<50.3	U	50.3		mg/Kg		07/24/23 17:37	07/30/23 18:39	1
Diesel Range Organics (Over C10-C28)	<50.3	U	50.3		mg/Kg		07/24/23 17:37	07/30/23 18:39	1
OII Range Organics (Over C28-C36)	<50.3	U	50.3		mg/Kg		07/24/23 17:37	07/30/23 18:39	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*112*		*70 - 130*	*07/24/23 17:37*	*07/30/23 18:39*	*1*
o-Terphenyl	*102*		*70 - 130*	*07/24/23 17:37*	*07/30/23 18:39*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**355**		5.02		mg/Kg			07/19/23 11:54	1

Client Sample ID: BES23-64 0.5'

Lab Sample ID: 890-4951-9
Matrix: Solid
Date Collected: 07/14/23 10:40
Date Received: 07/14/23 15:02
Sample Depth: 0.5

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		07/19/23 15:10	07/24/23 04:54	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		07/19/23 15:10	07/24/23 04:54	1
Toluene	<0.00200	U	0.00200		mg/Kg		07/19/23 15:10	07/24/23 04:54	1
Xylenes, Total	<0.00399	U	0.00399		mg/Kg		07/19/23 15:10	07/24/23 04:54	1
m-Xylene & p-Xylene	<0.00399	U	0.00399		mg/Kg		07/19/23 15:10	07/24/23 04:54	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		07/19/23 15:10	07/24/23 04:54	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*87*		*70 - 130*	*07/19/23 15:10*	*07/24/23 04:54*	*1*
1,4-Difluorobenzene (Surr)	*110*		*70 - 130*	*07/19/23 15:10*	*07/24/23 04:54*	*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			07/24/23 11:25	1

Method: SW846 8015 NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.4	U	50.4		mg/Kg			07/31/23 16:01	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	<50.4	U	50.4		mg/Kg		07/24/23 17:37	07/30/23 19:02	1
Diesel Range Organics (Over C10-C28)	<50.4	U	50.4		mg/Kg		07/24/23 17:37	07/30/23 19:02	1
OII Range Organics (Over C28-C36)	<50.4	U	50.4		mg/Kg		07/24/23 17:37	07/30/23 19:02	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*120*		*70 - 130*	*07/24/23 17:37*	*07/30/23 19:02*	*1*
o-Terphenyl	*109*		*70 - 130*	*07/24/23 17:37*	*07/30/23 19:02*	*1*

Client Sample Results

Client: Vertex
Project/Site: Corral Fly

Job ID: 890-4951-1
SDG: 23E-02502

Client Sample ID: BES23-64 0.5'

Lab Sample ID: 890-4951-9
Matrix: Solid
Date Collected: 07/14/23 10:40
Date Received: 07/14/23 15:02
Sample Depth: 0.5

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**188**		4.95		mg/Kg			07/19/23 11:59	1

Client Sample ID: WES23-01 0.5'

Lab Sample ID: 890-4951-10
Matrix: Solid
Date Collected: 07/14/23 10:45
Date Received: 07/14/23 15:02
Sample Depth: 0.5

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00198	U	0.00198		mg/Kg		07/19/23 15:10	07/24/23 05:14	1
Ethylbenzene	<0.00198	U	0.00198		mg/Kg		07/19/23 15:10	07/24/23 05:14	1
Toluene	<0.00198	U	0.00198		mg/Kg		07/19/23 15:10	07/24/23 05:14	1
Xylenes, Total	<0.00397	U	0.00397		mg/Kg		07/19/23 15:10	07/24/23 05:14	1
m-Xylene & p-Xylene	<0.00397	U	0.00397		mg/Kg		07/19/23 15:10	07/24/23 05:14	1
o-Xylene	<0.00198	U	0.00198		mg/Kg		07/19/23 15:10	07/24/23 05:14	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*105*		*70 - 130*	*07/19/23 15:10*	*07/24/23 05:14*	*1*
1,4-Difluorobenzene (Surr)	*78*		*70 - 130*	*07/19/23 15:10*	*07/24/23 05:14*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00397	U	0.00397		mg/Kg			07/24/23 11:25	1

Method: SW846 8015 NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**118**		49.6		mg/Kg			07/31/23 16:01	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	<49.6	U	49.6		mg/Kg		07/24/23 17:42	07/30/23 22:01	1
Diesel Range Organics (Over C10-C28)	**118**		49.6		mg/Kg		07/24/23 17:42	07/30/23 22:01	1
OII Range Organics (Over C28-C36)	<49.6	U	49.6		mg/Kg		07/24/23 17:42	07/30/23 22:01	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*100*		*70 - 130*	*07/24/23 17:42*	*07/30/23 22:01*	*1*
o-Terphenyl	*93*		*70 - 130*	*07/24/23 17:42*	*07/30/23 22:01*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**5240**		50.4		mg/Kg			07/19/23 12:35	10

Client Sample Results

Client: Vertex
Project/Site: Corral Fly

Job ID: 890-4951-1
SDG: 23E-02502

Client Sample ID: WES23-02 0.5'

Lab Sample ID: 890-4951-11
Matrix: Solid
Date Collected: 07/14/23 10:50
Date Received: 07/14/23 15:02
Sample Depth: 0.5

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00201	U *1	0.00201		mg/Kg		07/20/23 13:55	07/22/23 18:02	1
Ethylbenzene	<0.00201	U *- *1	0.00201		mg/Kg		07/20/23 13:55	07/22/23 18:02	1
Toluene	<0.00201	U *- *1	0.00201		mg/Kg		07/20/23 13:55	07/22/23 18:02	1
Xylenes, Total	<0.00402	U *- *1	0.00402		mg/Kg		07/20/23 13:55	07/22/23 18:02	1
m-Xylene & p-Xylene	<0.00402	U *- *1	0.00402		mg/Kg		07/20/23 13:55	07/22/23 18:02	1
o-Xylene	<0.00201	U *- *1	0.00201		mg/Kg		07/20/23 13:55	07/22/23 18:02	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*100*		*70 - 130*	*07/20/23 13:55*	*07/22/23 18:02*	*1*
1,4-Difluorobenzene (Surr)	*93*		*70 - 130*	*07/20/23 13:55*	*07/22/23 18:02*	*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			07/24/23 09:06	1

Method: SW846 8015 NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**71.0**		50.0		mg/Kg			07/31/23 16:01	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		07/24/23 17:42	07/30/23 22:23	1
Diesel Range Organics (Over C10-C28)	**71.0**		50.0		mg/Kg		07/24/23 17:42	07/30/23 22:23	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		07/24/23 17:42	07/30/23 22:23	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*121*		*70 - 130*	*07/24/23 17:42*	*07/30/23 22:23*	*1*
o-Terphenyl	*112*		*70 - 130*	*07/24/23 17:42*	*07/30/23 22:23*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**170**		4.99		mg/Kg			07/19/23 12:40	1

Client Sample ID: WES23-03 0.5'

Lab Sample ID: 890-4951-12
Matrix: Solid
Date Collected: 07/14/23 10:55
Date Received: 07/14/23 15:02
Sample Depth: 0.5

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U *1	0.00200		mg/Kg		07/20/23 13:55	07/22/23 18:22	1
Ethylbenzene	<0.00200	U *- *1	0.00200		mg/Kg		07/20/23 13:55	07/22/23 18:22	1
Toluene	<0.00200	U *- *1	0.00200		mg/Kg		07/20/23 13:55	07/22/23 18:22	1
Xylenes, Total	<0.00399	U *- *1	0.00399		mg/Kg		07/20/23 13:55	07/22/23 18:22	1
m-Xylene & p-Xylene	<0.00399	U *- *1	0.00399		mg/Kg		07/20/23 13:55	07/22/23 18:22	1
o-Xylene	<0.00200	U *- *1	0.00200		mg/Kg		07/20/23 13:55	07/22/23 18:22	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*94*		*70 - 130*	*07/20/23 13:55*	*07/22/23 18:22*	*1*

Client Sample Results

Client: Vertex
Project/Site: Corral Fly

Job ID: 890-4951-1
SDG: 23E-02502

Client Sample ID: WES23-03 0.5'

Lab Sample ID: 890-4951-12
Matrix: Solid
Date Collected: 07/14/23 10:55
Date Received: 07/14/23 15:02
Sample Depth: 0.5

Method: SW846 8021B - Volatile Organic Compounds (GC) (Continued)

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Difluorobenzene (Surr)	*94*		*70 - 130*	*07/20/23 13:55*	*07/22/23 18:22*	*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			07/24/23 09:06	1

Method: SW846 8015 NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**255**		50.3		mg/Kg			07/31/23 16:01	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	<50.3	U	50.3		mg/Kg		07/24/23 17:42	07/30/23 20:55	1
Diesel Range Organics (Over C10-C28)	**255**		50.3		mg/Kg		07/24/23 17:42	07/30/23 20:55	1
OII Range Organics (Over C28-C36)	<50.3	U	50.3		mg/Kg		07/24/23 17:42	07/30/23 20:55	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*117*		*70 - 130*	*07/24/23 17:42*	*07/30/23 20:55*	*1*
o-Terphenyl	*109*		*70 - 130*	*07/24/23 17:42*	*07/30/23 20:55*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**1520**		24.9		mg/Kg			07/19/23 12:45	5

Client Sample ID: WES23-04 0.5'

Lab Sample ID: 890-4951-13
Matrix: Solid
Date Collected: 07/14/23 11:00
Date Received: 07/14/23 15:02
Sample Depth: 0.5

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00198	U *1	0.00198		mg/Kg		07/20/23 13:55	07/22/23 18:43	1
Ethylbenzene	<0.00198	U *- *1	0.00198		mg/Kg		07/20/23 13:55	07/22/23 18:43	1
Toluene	<0.00198	U *- *1	0.00198		mg/Kg		07/20/23 13:55	07/22/23 18:43	1
Xylenes, Total	<0.00396	U *- *1	0.00396		mg/Kg		07/20/23 13:55	07/22/23 18:43	1
m-Xylene & p-Xylene	<0.00396	U *- *1	0.00396		mg/Kg		07/20/23 13:55	07/22/23 18:43	1
o-Xylene	<0.00198	U *- *1	0.00198		mg/Kg		07/20/23 13:55	07/22/23 18:43	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*97*		*70 - 130*	*07/20/23 13:55*	*07/22/23 18:43*	*1*
1,4-Difluorobenzene (Surr)	*97*		*70 - 130*	*07/20/23 13:55*	*07/22/23 18:43*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00396	U	0.00396		mg/Kg			07/24/23 09:06	1

Method: SW846 8015 NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.5	U	50.5		mg/Kg			07/31/23 16:01	1

Client Sample Results

Client: Vertex
Project/Site: Corral Fly

Job ID: 890-4951-1
SDG: 23E-02502

Client Sample ID: WES23-04 0.5'

Lab Sample ID: 890-4951-13
Matrix: Solid
Date Collected: 07/14/23 11:00
Date Received: 07/14/23 15:02
Sample Depth: 0.5

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	<50.5	U	50.5		mg/Kg		07/24/23 17:42	07/30/23 22:46	1
Diesel Range Organics (Over C10-C28)	<50.5	U	50.5		mg/Kg		07/24/23 17:42	07/30/23 22:46	1
OII Range Organics (Over C28-C36)	<50.5	U	50.5		mg/Kg		07/24/23 17:42	07/30/23 22:46	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*123*		*70 - 130*	*07/24/23 17:42*	*07/30/23 22:46*	*1*
o-Terphenyl	*112*		*70 - 130*	*07/24/23 17:42*	*07/30/23 22:46*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**4240**		49.6		mg/Kg			07/19/23 12:50	10

Client Sample ID: WES23-05 0.5'

Lab Sample ID: 890-4951-14
Matrix: Solid
Date Collected: 07/14/23 11:05
Date Received: 07/14/23 15:02
Sample Depth: 0.5

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U *1	0.00200		mg/Kg		07/20/23 13:55	07/22/23 19:03	1
Ethylbenzene	<0.00200	U *- *1	0.00200		mg/Kg		07/20/23 13:55	07/22/23 19:03	1
Toluene	<0.00200	U *- *1	0.00200		mg/Kg		07/20/23 13:55	07/22/23 19:03	1
Xylenes, Total	<0.00400	U *- *1	0.00400		mg/Kg		07/20/23 13:55	07/22/23 19:03	1
m-Xylene & p-Xylene	<0.00400	U *- *1	0.00400		mg/Kg		07/20/23 13:55	07/22/23 19:03	1
o-Xylene	<0.00200	U *- *1	0.00200		mg/Kg		07/20/23 13:55	07/22/23 19:03	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*93*		*70 - 130*	*07/20/23 13:55*	*07/22/23 19:03*	*1*
1,4-Difluorobenzene (Surr)	*100*		*70 - 130*	*07/20/23 13:55*	*07/22/23 19:03*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00400	U	0.00400		mg/Kg			07/24/23 09:06	1

Method: SW846 8015 NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.2	U	50.2		mg/Kg			07/31/23 16:01	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	<50.2	U	50.2		mg/Kg		07/24/23 17:42	07/30/23 23:08	1
Diesel Range Organics (Over C10-C28)	<50.2	U	50.2		mg/Kg		07/24/23 17:42	07/30/23 23:08	1
OII Range Organics (Over C28-C36)	<50.2	U	50.2		mg/Kg		07/24/23 17:42	07/30/23 23:08	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*140*	*S1+*	*70 - 130*	*07/24/23 17:42*	*07/30/23 23:08*	*1*
o-Terphenyl	*126*		*70 - 130*	*07/24/23 17:42*	*07/30/23 23:08*	*1*

Client Sample Results

Client: Vertex
Project/Site: Corral Fly

Job ID: 890-4951-1
SDG: 23E-02502

Client Sample ID: WES23-05 0.5'

Lab Sample ID: 890-4951-14
Matrix: Solid
Date Collected: 07/14/23 11:05
Date Received: 07/14/23 15:02
Sample Depth: 0.5

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	140		5.02		mg/Kg			07/19/23 12:55	1

Client Sample ID: WES23-06 0.5'

Lab Sample ID: 890-4951-15
Matrix: Solid
Date Collected: 07/14/23 11:10
Date Received: 07/14/23 15:02
Sample Depth: 0.5

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U *1	0.00199		mg/Kg		07/20/23 13:55	07/22/23 19:24	1
Ethylbenzene	<0.00199	U *- *1	0.00199		mg/Kg		07/20/23 13:55	07/22/23 19:24	1
Toluene	<0.00199	U *- *1	0.00199		mg/Kg		07/20/23 13:55	07/22/23 19:24	1
Xylenes, Total	<0.00398	U *- *1	0.00398		mg/Kg		07/20/23 13:55	07/22/23 19:24	1
m-Xylene & p-Xylene	<0.00398	U *- *1	0.00398		mg/Kg		07/20/23 13:55	07/22/23 19:24	1
o-Xylene	<0.00199	U *- *1	0.00199		mg/Kg		07/20/23 13:55	07/22/23 19:24	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*101*		*70 - 130*	*07/20/23 13:55*	*07/22/23 19:24*	*1*
1,4-Difluorobenzene (Surr)	*97*		*70 - 130*	*07/20/23 13:55*	*07/22/23 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			07/24/23 09:06	1

Method: SW846 8015 NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.4	U	50.4		mg/Kg			07/31/23 16:01	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	<50.4	U	50.4		mg/Kg		07/24/23 17:42	07/30/23 23:30	1
Diesel Range Organics (Over C10-C28)	<50.4	U	50.4		mg/Kg		07/24/23 17:42	07/30/23 23:30	1
OII Range Organics (Over C28-C36)	<50.4	U	50.4		mg/Kg		07/24/23 17:42	07/30/23 23:30	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*126*		*70 - 130*	*07/24/23 17:42*	*07/30/23 23:30*	*1*
o-Terphenyl	*116*		*70 - 130*	*07/24/23 17:42*	*07/30/23 23:30*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	351		4.97		mg/Kg			07/19/23 13:00	1

Surrogate Summary

Client: Vertex
Project/Site: Corral Fly

Job ID: 890-4951-1
SDG: 23E-02502

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)										
880-30968-A-3-A MS	Matrix Spike	124	88										
880-30968-A-3-B MSD	Matrix Spike Duplicate	114	96										
890-4951-1	BES23-56 0.5'	83	94										
890-4951-1 MS	BES23-56 0.5'	54 S1-	94										
890-4951-1 MSD	BES23-56 0.5'	41 S1-	78										
890-4951-2	BES23-57 0.5'	90	103										
890-4951-3	BES23-58 0.5'	89	99										
890-4951-4	BES23-59 0.5'	89	106										
890-4951-5	BES23-60 0.5'	94	105										
890-4951-6	BES23-61 0.5'	96	97										
890-4951-7	BES23-62 0.5'	93	98										
890-4951-8	BES23-63 0.5'	104	100										
890-4951-9	BES23-64 0.5'	87	110										
890-4951-10	WES23-01 0.5'	105	78										
890-4951-11	WES23-02 0.5'	100	93										
890-4951-12	WES23-03 0.5'	94	94										
890-4951-13	WES23-04 0.5'	97	97										
890-4951-14	WES23-05 0.5'	93	100										
890-4951-15	WES23-06 0.5'	101	97										
LCS 880-58056/1-A	Lab Control Sample	89	98										
LCS 880-58151/1-A	Lab Control Sample	98	96										
LCSD 880-58056/2-A	Lab Control Sample Dup	91	96										
LCSD 880-58151/2-A	Lab Control Sample Dup	105	98										
MB 880-57974/5-A	Method Blank	104	130										
MB 880-58056/5-A	Method Blank	102	121										
MB 880-58151/5-A	Method Blank	97	112										

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)										
890-4950-A-41-E MS	Matrix Spike	122	103										
890-4950-A-41-F MSD	Matrix Spike Duplicate	123	102										
890-4951-1	BES23-56 0.5'	116	106										
890-4951-2	BES23-57 0.5'	116	111										
890-4951-3	BES23-58 0.5'	136 S1+	129										
890-4951-4	BES23-59 0.5'	114	105										
890-4951-5	BES23-60 0.5'	124	115										
890-4951-6	BES23-61 0.5'	126	114										
890-4951-7	BES23-62 0.5'	117	108										
890-4951-8	BES23-63 0.5'	112	102										
890-4951-9	BES23-64 0.5'	120	109										
890-4951-10	WES23-01 0.5'	100	93										
890-4951-11	WES23-02 0.5'	121	112										

Surrogate Summary

Client: Vertex Job ID: 890-4951-1
Project/Site: Corral Fly SDG: 23E-02502

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)								
890-4951-12	WES23-03 0.5'	117	109								
890-4951-12 MS	WES23-03 0.5'	113	93								
890-4951-12 MSD	WES23-03 0.5'	115	95								
890-4951-13	WES23-04 0.5'	123	112								
890-4951-14	WES23-05 0.5'	140 S1+	126								
890-4951-15	WES23-06 0.5'	126	116								
LCS 880-58405/2-A	Lab Control Sample	114	116								
LCS 880-58406/2-A	Lab Control Sample	100	109								
LCSD 880-58405/3-A	Lab Control Sample Dup	114	119								
LCSD 880-58406/3-A	Lab Control Sample Dup	100	107								
MB 880-58405/1-A	Method Blank	163 S1+	155 S1+								
MB 880-58406/1-A	Method Blank	162 S1+	155 S1+								

Surrogate Legend

1CO = 1-Chlorooctane

OTPH = o-Terphenyl

QC Sample Results

Client: Vertex
Project/Site: Corral Fly

Job ID: 890-4951-1
SDG: 23E-02502

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-57974/5-A
Matrix: Solid
Analysis Batch: 58285

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 57974

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		07/18/23 16:31	07/23/23 14:04	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		07/18/23 16:31	07/23/23 14:04	1
Toluene	<0.00200	U	0.00200		mg/Kg		07/18/23 16:31	07/23/23 14:04	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		07/18/23 16:31	07/23/23 14:04	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		07/18/23 16:31	07/23/23 14:04	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		07/18/23 16:31	07/23/23 14:04	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*104*		*70 - 130*	*07/18/23 16:31*	*07/23/23 14:04*	*1*
1,4-Difluorobenzene (Surr)	*130*		*70 - 130*	*07/18/23 16:31*	*07/23/23 14:04*	*1*

Lab Sample ID: MB 880-58056/5-A
Matrix: Solid
Analysis Batch: 58285

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 58056

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		07/19/23 15:10	07/24/23 01:42	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		07/19/23 15:10	07/24/23 01:42	1
Toluene	<0.00200	U	0.00200		mg/Kg		07/19/23 15:10	07/24/23 01:42	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		07/19/23 15:10	07/24/23 01:42	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		07/19/23 15:10	07/24/23 01:42	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		07/19/23 15:10	07/24/23 01:42	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*102*		*70 - 130*	*07/19/23 15:10*	*07/24/23 01:42*	*1*
1,4-Difluorobenzene (Surr)	*121*		*70 - 130*	*07/19/23 15:10*	*07/24/23 01:42*	*1*

Lab Sample ID: LCS 880-58056/1-A
Matrix: Solid
Analysis Batch: 58285

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 58056

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene			0.100	0.1000		mg/Kg		100	70 - 130		
Ethylbenzene			0.100	0.08983		mg/Kg		90	70 - 130		
Toluene			0.100	0.09678		mg/Kg		97	70 - 130		
m-Xylene & p-Xylene			0.200	0.1925		mg/Kg		96	70 - 130		
o-Xylene			0.100	0.09408		mg/Kg		94	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*89*		*70 - 130*
1,4-Difluorobenzene (Surr)	*98*		*70 - 130*

Lab Sample ID: LCSD 880-58056/2-A
Matrix: Solid
Analysis Batch: 58285

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 58056

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene			0.100	0.1004		mg/Kg		100	70 - 130	0	35

QC Sample Results

Client: Vertex
Project/Site: Corral Fly

Job ID: 890-4951-1
SDG: 23E-02502

Method: 8021B - Volatile Organic Compounds (GC) (Continued)

Lab Sample ID: LCSD 880-58056/2-A — **Client Sample ID: Lab Control Sample Dup**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 58285 — **Prep Batch: 58056**

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Ethylbenzene			0.100	0.09049		mg/Kg		90	70 - 130	1	35
Toluene			0.100	0.09518		mg/Kg		95	70 - 130	2	35
m-Xylene & p-Xylene			0.200	0.1982		mg/Kg		99	70 - 130	3	35
o-Xylene			0.100	0.09666		mg/Kg		97	70 - 130	3	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*91*		*70 - 130*
1,4-Difluorobenzene (Surr)	*96*		*70 - 130*

Lab Sample ID: 890-4951-1 MS — **Client Sample ID: BES23-56 0.5'**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 58285 — **Prep Batch: 58056**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	<0.00202	U F1	0.0994	0.06481	F1	mg/Kg		65	70 - 130
Ethylbenzene	<0.00202	U	0.0994	0.07629		mg/Kg		77	70 - 130
Toluene	<0.00202	U F1	0.0994	0.06718	F1	mg/Kg		67	70 - 130
m-Xylene & p-Xylene	<0.00404	U	0.199	0.1584		mg/Kg		80	70 - 130
o-Xylene	<0.00202	U	0.0994	0.07646		mg/Kg		77	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*54*	*S1-*	*70 - 130*
1,4-Difluorobenzene (Surr)	*94*		*70 - 130*

Lab Sample ID: 890-4951-1 MSD — **Client Sample ID: BES23-56 0.5'**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 58285 — **Prep Batch: 58056**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	<0.00202	U F1	0.0990	0.07502		mg/Kg		76	70 - 130	15	35
Ethylbenzene	<0.00202	U	0.0990	0.07566		mg/Kg		76	70 - 130	1	35
Toluene	<0.00202	U F1	0.0990	0.07520		mg/Kg		75	70 - 130	11	35
m-Xylene & p-Xylene	<0.00404	U	0.198	0.1456		mg/Kg		74	70 - 130	8	35
o-Xylene	<0.00202	U	0.0990	0.07642		mg/Kg		77	70 - 130	0	35

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*41*	*S1-*	*70 - 130*
1,4-Difluorobenzene (Surr)	*78*		*70 - 130*

Lab Sample ID: MB 880-58151/5-A — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 58250 — **Prep Batch: 58151**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		07/20/23 13:55	07/22/23 10:55	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		07/20/23 13:55	07/22/23 10:55	1
Toluene	<0.00200	U	0.00200		mg/Kg		07/20/23 13:55	07/22/23 10:55	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		07/20/23 13:55	07/22/23 10:55	1

QC Sample Results

Client: Vertex
Project/Site: Corral Fly

Job ID: 890-4951-1
SDG: 23E-02502

Method: 8021B - Volatile Organic Compounds (GC) (Continued)

Lab Sample ID: MB 880-58151/5-A
Matrix: Solid
Analysis Batch: 58250

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 58151

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		07/20/23 13:55	07/22/23 10:55	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		07/20/23 13:55	07/22/23 10:55	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*97*		*70 - 130*	*07/20/23 13:55*	*07/22/23 10:55*	*1*
1,4-Difluorobenzene (Surr)	*112*		*70 - 130*	*07/20/23 13:55*	*07/22/23 10:55*	*1*

Lab Sample ID: LCS 880-58151/1-A
Matrix: Solid
Analysis Batch: 58250

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 58151

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	0.100	0.1198		mg/Kg		120	70 - 130
Ethylbenzene	0.100	0.1136		mg/Kg		114	70 - 130
Toluene	0.100	0.1100		mg/Kg		110	70 - 130
m-Xylene & p-Xylene	0.200	0.2347		mg/Kg		117	70 - 130
o-Xylene	0.100	0.1087		mg/Kg		109	70 - 130

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*98*		*70 - 130*
1,4-Difluorobenzene (Surr)	*96*		*70 - 130*

Lab Sample ID: LCSD 880-58151/2-A
Matrix: Solid
Analysis Batch: 58250

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 58151

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	0.100	0.08046	*1	mg/Kg		80	70 - 130	39	35
Ethylbenzene	0.100	0.05791	*- *1	mg/Kg		58	70 - 130	65	35
Toluene	0.100	0.06307	*- *1	mg/Kg		63	70 - 130	54	35
m-Xylene & p-Xylene	0.200	0.1105	*- *1	mg/Kg		55	70 - 130	72	35
o-Xylene	0.100	0.05644	*- *1	mg/Kg		56	70 - 130	63	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*105*		*70 - 130*
1,4-Difluorobenzene (Surr)	*98*		*70 - 130*

Lab Sample ID: 880-30968-A-3-A MS
Matrix: Solid
Analysis Batch: 58250

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 58151

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	<0.00198	U *1 F1	0.0994	0.1430	F1	mg/Kg		144	70 - 130
Ethylbenzene	0.00282	*- *1 F1	0.0994	0.1454	F1	mg/Kg		143	70 - 130
Toluene	0.00242	*- *1 F1	0.0994	0.1488	F1	mg/Kg		147	70 - 130
m-Xylene & p-Xylene	0.00541	*- *1 F1	0.199	0.2656	F1	mg/Kg		131	70 - 130
o-Xylene	0.00493	*- *1	0.0994	0.1193		mg/Kg		115	70 - 130

QC Sample Results

Client: Vertex
Project/Site: Corral Fly

Job ID: 890-4951-1
SDG: 23E-02502

Method: 8021B - Volatile Organic Compounds (GC) (Continued)

Lab Sample ID: 880-30968-A-3-A MS
Matrix: Solid
Analysis Batch: 58250

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 58151

Surrogate	MS %Recovery	MS Qualifier	Limits
4-Bromofluorobenzene (Surr)	*124*		*70 - 130*
1,4-Difluorobenzene (Surr)	*88*		*70 - 130*

Lab Sample ID: 880-30968-A-3-B MSD
Matrix: Solid
Analysis Batch: 58250

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 58151

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	<0.00198	U *1 F1	0.0998	0.1273		mg/Kg		128	70 - 130	12	35
Ethylbenzene	0.00282	*- *1 F1	0.0998	0.1262		mg/Kg		124	70 - 130	14	35
Toluene	0.00242	*- *1 F1	0.0998	0.1137		mg/Kg		112	70 - 130	27	35
m-Xylene & p-Xylene	0.00541	*- *1 F1	0.200	0.2500		mg/Kg		123	70 - 130	6	35
o-Xylene	0.00493	*- *1	0.0998	0.1125		mg/Kg		108	70 - 130	6	35

Surrogate	MSD %Recovery	MSD Qualifier	Limits
4-Bromofluorobenzene (Surr)	*114*		*70 - 130*
1,4-Difluorobenzene (Surr)	*96*		*70 - 130*

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

Lab Sample ID: MB 880-58405/1-A
Matrix: Solid
Analysis Batch: 58792

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 58405

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		07/24/23 17:37	07/30/23 08:16	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		07/24/23 17:37	07/30/23 08:16	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		07/24/23 17:37	07/30/23 08:16	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	*163*	*S1+*	*70 - 130*	*07/24/23 17:37*	*07/30/23 08:16*	*1*
o-Terphenyl	*155*	*S1+*	*70 - 130*	*07/24/23 17:37*	*07/30/23 08:16*	*1*

Lab Sample ID: LCS 880-58405/2-A
Matrix: Solid
Analysis Batch: 58792

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 58405

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics (GRO)-C6-C10	1000	973.8		mg/Kg		97	70 - 130
Diesel Range Organics (Over C10-C28)	1000	1043		mg/Kg		104	70 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1-Chlorooctane	*114*		*70 - 130*
o-Terphenyl	*116*		*70 - 130*

QC Sample Results

Client: Vertex
Project/Site: Corral Fly

Job ID: 890-4951-1
SDG: 23E-02502

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

Lab Sample ID: LCSD 880-58405/3-A
Matrix: Solid
Analysis Batch: 58792

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 58405

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			1000	965.4		mg/Kg		97	70 - 130	1	20
Diesel Range Organics (Over C10-C28)			1000	1058		mg/Kg		106	70 - 130	1	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1-Chlorooctane	*114*		*70 - 130*
o-Terphenyl	*119*		*70 - 130*

Lab Sample ID: 890-4950-A-41-E MS
Matrix: Solid
Analysis Batch: 58792

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 58405

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics (GRO)-C6-C10	<50.2	U	998	865.6		mg/Kg		87	70 - 130
Diesel Range Organics (Over C10-C28)	<50.2	U	998	1257		mg/Kg		124	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
1-Chlorooctane	*122*		*70 - 130*
o-Terphenyl	*103*		*70 - 130*

Lab Sample ID: 890-4950-A-41-F MSD
Matrix: Solid
Analysis Batch: 58792

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 58405

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	<50.2	U	998	863.9		mg/Kg		87	70 - 130	0	20
Diesel Range Organics (Over C10-C28)	<50.2	U	998	1249		mg/Kg		123	70 - 130	1	20

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
1-Chlorooctane	*123*		*70 - 130*
o-Terphenyl	*102*		*70 - 130*

Lab Sample ID: MB 880-58406/1-A
Matrix: Solid
Analysis Batch: 58792

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 58406

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		07/24/23 17:42	07/30/23 19:47	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		07/24/23 17:42	07/30/23 19:47	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		07/24/23 17:42	07/30/23 19:47	1

QC Sample Results

Client: Vertex
Project/Site: Corral Fly

Job ID: 890-4951-1
SDG: 23E-02502

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

Lab Sample ID: MB 880-58406/1-A
Matrix: Solid
Analysis Batch: 58792

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 58406

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	162	S1+	70 - 130	07/24/23 17:42	07/30/23 19:47	1
o-Terphenyl	155	S1+	70 - 130	07/24/23 17:42	07/30/23 19:47	1

Lab Sample ID: LCS 880-58406/2-A
Matrix: Solid
Analysis Batch: 58792

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 58406

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Gasoline Range Organics (GRO)-C6-C10			1000	869.2		mg/Kg		87	70 - 130		
Diesel Range Organics (Over C10-C28)			1000	938.4		mg/Kg		94	70 - 130		

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1-Chlorooctane	100		70 - 130
o-Terphenyl	109		70 - 130

Lab Sample ID: LCSD 880-58406/3-A
Matrix: Solid
Analysis Batch: 58792

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 58406

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			1000	864.3		mg/Kg		86	70 - 130	1	20
Diesel Range Organics (Over C10-C28)			1000	921.7		mg/Kg		92	70 - 130	2	20

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
1-Chlorooctane	100		70 - 130
o-Terphenyl	107		70 - 130

Lab Sample ID: 890-4951-12 MS
Matrix: Solid
Analysis Batch: 58792

Client Sample ID: WES23-03 0.5'
Prep Type: Total/NA
Prep Batch: 58406

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Gasoline Range Organics (GRO)-C6-C10	<50.3	U	1010	748.0		mg/Kg		74	70 - 130		
Diesel Range Organics (Over C10-C28)	255		1010	1047		mg/Kg		79	70 - 130		

Surrogate	MS %Recovery	MS Qualifier	Limits
1-Chlorooctane	113		70 - 130
o-Terphenyl	93		70 - 130

QC Sample Results

Client: Vertex
Project/Site: Corral Fly

Job ID: 890-4951-1
SDG: 23E-02502

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

Lab Sample ID: 890-4951-12 MSD
Matrix: Solid
Analysis Batch: 58792

Client Sample ID: WES23-03 0.5'
Prep Type: Total/NA
Prep Batch: 58406

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	<50.3	U	1010	755.1		mg/Kg		75	70 - 130	1	20
Diesel Range Organics (Over C10-C28)	255		1010	1061		mg/Kg		80	70 - 130	1	20

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
1-Chlorooctane	*115*		*70 - 130*
o-Terphenyl	*95*		*70 - 130*

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-57875/1-A
Matrix: Solid
Analysis Batch: 58007

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			07/19/23 08:12	1

Lab Sample ID: LCS 880-57875/2-A
Matrix: Solid
Analysis Batch: 58007

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	250	238.8		mg/Kg		96	90 - 110

Lab Sample ID: LCSD 880-57875/3-A
Matrix: Solid
Analysis Batch: 58007

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	234.9		mg/Kg		94	90 - 110	2	20

Lab Sample ID: 890-4950-A-46-B MS
Matrix: Solid
Analysis Batch: 58007

Client Sample ID: Matrix Spike
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	18400	F1	12400	28570	F1	mg/Kg		82	90 - 110

Lab Sample ID: 890-4950-A-46-C MSD
Matrix: Solid
Analysis Batch: 58007

Client Sample ID: Matrix Spike Duplicate
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	18400	F1	12400	28280	F1	mg/Kg		80	90 - 110	1	20

QC Sample Results

Client: Vertex
Project/Site: Corral Fly

Job ID: 890-4951-1
SDG: 23E-02502

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: MB 880-57911/1-A
Matrix: Solid
Analysis Batch: 58043

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			07/19/23 11:12	1

Lab Sample ID: LCS 880-57911/2-A
Matrix: Solid
Analysis Batch: 58043

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride			250	239.4		mg/Kg		96	90 - 110		

Lab Sample ID: LCSD 880-57911/3-A
Matrix: Solid
Analysis Batch: 58043

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	240.3		mg/Kg		96	90 - 110	0	20

Lab Sample ID: 890-4951-5 MS
Matrix: Solid
Analysis Batch: 58043

Client Sample ID: BES23-60 0.5'
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride	583		1250	1777		mg/Kg		95	90 - 110		

Lab Sample ID: 890-4951-5 MSD
Matrix: Solid
Analysis Batch: 58043

Client Sample ID: BES23-60 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	583		1250	1780		mg/Kg		96	90 - 110	0	20

Lab Sample ID: 890-4951-15 MS
Matrix: Solid
Analysis Batch: 58043

Client Sample ID: WES23-06 0.5'
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride	351		249	581.5		mg/Kg		93	90 - 110		

Lab Sample ID: 890-4951-15 MSD
Matrix: Solid
Analysis Batch: 58043

Client Sample ID: WES23-06 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	351		249	583.3		mg/Kg		93	90 - 110	0	20

QC Association Summary

Client: Vertex
Project/Site: Corral Fly

Job ID: 890-4951-1
SDG: 23E-02502

GC VOA

Prep Batch: 57974

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-57974/5-A	Method Blank	Total/NA	Solid	5035	

Prep Batch: 58056

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4951-1	BES23-56 0.5'	Total/NA	Solid	5035	
890-4951-2	BES23-57 0.5'	Total/NA	Solid	5035	
890-4951-3	BES23-58 0.5'	Total/NA	Solid	5035	
890-4951-4	BES23-59 0.5'	Total/NA	Solid	5035	
890-4951-5	BES23-60 0.5'	Total/NA	Solid	5035	
890-4951-6	BES23-61 0.5'	Total/NA	Solid	5035	
890-4951-7	BES23-62 0.5'	Total/NA	Solid	5035	
890-4951-8	BES23-63 0.5'	Total/NA	Solid	5035	
890-4951-9	BES23-64 0.5'	Total/NA	Solid	5035	
890-4951-10	WES23-01 0.5'	Total/NA	Solid	5035	
MB 880-58056/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-58056/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-58056/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
890-4951-1 MS	BES23-56 0.5'	Total/NA	Solid	5035	
890-4951-1 MSD	BES23-56 0.5'	Total/NA	Solid	5035	

Prep Batch: 58151

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4951-11	WES23-02 0.5'	Total/NA	Solid	5035	
890-4951-12	WES23-03 0.5'	Total/NA	Solid	5035	
890-4951-13	WES23-04 0.5'	Total/NA	Solid	5035	
890-4951-14	WES23-05 0.5'	Total/NA	Solid	5035	
890-4951-15	WES23-06 0.5'	Total/NA	Solid	5035	
MB 880-58151/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-58151/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-58151/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
880-30968-A-3-A MS	Matrix Spike	Total/NA	Solid	5035	
880-30968-A-3-B MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Analysis Batch: 58250

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4951-11	WES23-02 0.5'	Total/NA	Solid	8021B	58151
890-4951-12	WES23-03 0.5'	Total/NA	Solid	8021B	58151
890-4951-13	WES23-04 0.5'	Total/NA	Solid	8021B	58151
890-4951-14	WES23-05 0.5'	Total/NA	Solid	8021B	58151
890-4951-15	WES23-06 0.5'	Total/NA	Solid	8021B	58151
MB 880-58151/5-A	Method Blank	Total/NA	Solid	8021B	58151
LCS 880-58151/1-A	Lab Control Sample	Total/NA	Solid	8021B	58151
LCSD 880-58151/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	58151
880-30968-A-3-A MS	Matrix Spike	Total/NA	Solid	8021B	58151
880-30968-A-3-B MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	58151

Analysis Batch: 58285

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4951-1	BES23-56 0.5'	Total/NA	Solid	8021B	58056
890-4951-2	BES23-57 0.5'	Total/NA	Solid	8021B	58056
890-4951-3	BES23-58 0.5'	Total/NA	Solid	8021B	58056

QC Association Summary

Client: Vertex
Project/Site: Corral Fly

Job ID: 890-4951-1
SDG: 23E-02502

GC VOA (Continued)

Analysis Batch: 58285 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4951-4	BES23-59 0.5'	Total/NA	Solid	8021B	58056
890-4951-5	BES23-60 0.5'	Total/NA	Solid	8021B	58056
890-4951-6	BES23-61 0.5'	Total/NA	Solid	8021B	58056
890-4951-7	BES23-62 0.5'	Total/NA	Solid	8021B	58056
890-4951-8	BES23-63 0.5'	Total/NA	Solid	8021B	58056
890-4951-9	BES23-64 0.5'	Total/NA	Solid	8021B	58056
890-4951-10	WES23-01 0.5'	Total/NA	Solid	8021B	58056
MB 880-57974/5-A	Method Blank	Total/NA	Solid	8021B	57974
MB 880-58056/5-A	Method Blank	Total/NA	Solid	8021B	58056
LCS 880-58056/1-A	Lab Control Sample	Total/NA	Solid	8021B	58056
LCSD 880-58056/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	58056
890-4951-1 MS	BES23-56 0.5'	Total/NA	Solid	8021B	58056
890-4951-1 MSD	BES23-56 0.5'	Total/NA	Solid	8021B	58056

Analysis Batch: 58312

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4951-1	BES23-56 0.5'	Total/NA	Solid	Total BTEX	
890-4951-2	BES23-57 0.5'	Total/NA	Solid	Total BTEX	
890-4951-3	BES23-58 0.5'	Total/NA	Solid	Total BTEX	
890-4951-4	BES23-59 0.5'	Total/NA	Solid	Total BTEX	
890-4951-5	BES23-60 0.5'	Total/NA	Solid	Total BTEX	
890-4951-6	BES23-61 0.5'	Total/NA	Solid	Total BTEX	
890-4951-7	BES23-62 0.5'	Total/NA	Solid	Total BTEX	
890-4951-8	BES23-63 0.5'	Total/NA	Solid	Total BTEX	
890-4951-9	BES23-64 0.5'	Total/NA	Solid	Total BTEX	
890-4951-10	WES23-01 0.5'	Total/NA	Solid	Total BTEX	
890-4951-11	WES23-02 0.5'	Total/NA	Solid	Total BTEX	
890-4951-12	WES23-03 0.5'	Total/NA	Solid	Total BTEX	
890-4951-13	WES23-04 0.5'	Total/NA	Solid	Total BTEX	
890-4951-14	WES23-05 0.5'	Total/NA	Solid	Total BTEX	
890-4951-15	WES23-06 0.5'	Total/NA	Solid	Total BTEX	

GC Semi VOA

Prep Batch: 58405

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4951-1	BES23-56 0.5'	Total/NA	Solid	8015NM Prep	
890-4951-2	BES23-57 0.5'	Total/NA	Solid	8015NM Prep	
890-4951-3	BES23-58 0.5'	Total/NA	Solid	8015NM Prep	
890-4951-4	BES23-59 0.5'	Total/NA	Solid	8015NM Prep	
890-4951-5	BES23-60 0.5'	Total/NA	Solid	8015NM Prep	
890-4951-6	BES23-61 0.5'	Total/NA	Solid	8015NM Prep	
890-4951-7	BES23-62 0.5'	Total/NA	Solid	8015NM Prep	
890-4951-8	BES23-63 0.5'	Total/NA	Solid	8015NM Prep	
890-4951-9	BES23-64 0.5'	Total/NA	Solid	8015NM Prep	
MB 880-58405/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-58405/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-58405/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-4950-A-41-E MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
890-4950-A-41-F MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

QC Association Summary

Client: Vertex
Project/Site: Corral Fly

Job ID: 890-4951-1
SDG: 23E-02502

GC Semi VOA

Prep Batch: 58406

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4951-10	WES23-01 0.5'	Total/NA	Solid	8015NM Prep	
890-4951-11	WES23-02 0.5'	Total/NA	Solid	8015NM Prep	
890-4951-12	WES23-03 0.5'	Total/NA	Solid	8015NM Prep	
890-4951-13	WES23-04 0.5'	Total/NA	Solid	8015NM Prep	
890-4951-14	WES23-05 0.5'	Total/NA	Solid	8015NM Prep	
890-4951-15	WES23-06 0.5'	Total/NA	Solid	8015NM Prep	
MB 880-58406/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-58406/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-58406/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-4951-12 MS	WES23-03 0.5'	Total/NA	Solid	8015NM Prep	
890-4951-12 MSD	WES23-03 0.5'	Total/NA	Solid	8015NM Prep	

Analysis Batch: 58792

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4951-1	BES23-56 0.5'	Total/NA	Solid	8015B NM	58405
890-4951-2	BES23-57 0.5'	Total/NA	Solid	8015B NM	58405
890-4951-3	BES23-58 0.5'	Total/NA	Solid	8015B NM	58405
890-4951-4	BES23-59 0.5'	Total/NA	Solid	8015B NM	58405
890-4951-5	BES23-60 0.5'	Total/NA	Solid	8015B NM	58405
890-4951-6	BES23-61 0.5'	Total/NA	Solid	8015B NM	58405
890-4951-7	BES23-62 0.5'	Total/NA	Solid	8015B NM	58405
890-4951-8	BES23-63 0.5'	Total/NA	Solid	8015B NM	58405
890-4951-9	BES23-64 0.5'	Total/NA	Solid	8015B NM	58405
890-4951-10	WES23-01 0.5'	Total/NA	Solid	8015B NM	58406
890-4951-11	WES23-02 0.5'	Total/NA	Solid	8015B NM	58406
890-4951-12	WES23-03 0.5'	Total/NA	Solid	8015B NM	58406
890-4951-13	WES23-04 0.5'	Total/NA	Solid	8015B NM	58406
890-4951-14	WES23-05 0.5'	Total/NA	Solid	8015B NM	58406
890-4951-15	WES23-06 0.5'	Total/NA	Solid	8015B NM	58406
MB 880-58405/1-A	Method Blank	Total/NA	Solid	8015B NM	58405
MB 880-58406/1-A	Method Blank	Total/NA	Solid	8015B NM	58406
LCS 880-58405/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	58405
LCS 880-58406/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	58406
LCSD 880-58405/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	58405
LCSD 880-58406/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	58406
890-4950-A-41-E MS	Matrix Spike	Total/NA	Solid	8015B NM	58405
890-4950-A-41-F MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	58405
890-4951-12 MS	WES23-03 0.5'	Total/NA	Solid	8015B NM	58406
890-4951-12 MSD	WES23-03 0.5'	Total/NA	Solid	8015B NM	58406

Analysis Batch: 58919

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4951-1	BES23-56 0.5'	Total/NA	Solid	8015 NM	
890-4951-2	BES23-57 0.5'	Total/NA	Solid	8015 NM	
890-4951-3	BES23-58 0.5'	Total/NA	Solid	8015 NM	
890-4951-4	BES23-59 0.5'	Total/NA	Solid	8015 NM	
890-4951-5	BES23-60 0.5'	Total/NA	Solid	8015 NM	
890-4951-6	BES23-61 0.5'	Total/NA	Solid	8015 NM	
890-4951-7	BES23-62 0.5'	Total/NA	Solid	8015 NM	
890-4951-8	BES23-63 0.5'	Total/NA	Solid	8015 NM	
890-4951-9	BES23-64 0.5'	Total/NA	Solid	8015 NM	

QC Association Summary

Client: Vertex
Project/Site: Corral Fly

Job ID: 890-4951-1
SDG: 23E-02502

GC Semi VOA (Continued)

Analysis Batch: 58919 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4951-10	WES23-01 0.5'	Total/NA	Solid	8015 NM	
890-4951-11	WES23-02 0.5'	Total/NA	Solid	8015 NM	
890-4951-12	WES23-03 0.5'	Total/NA	Solid	8015 NM	
890-4951-13	WES23-04 0.5'	Total/NA	Solid	8015 NM	
890-4951-14	WES23-05 0.5'	Total/NA	Solid	8015 NM	
890-4951-15	WES23-06 0.5'	Total/NA	Solid	8015 NM	

HPLC/IC

Leach Batch: 57875

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4951-1	BES23-56 0.5'	Soluble	Solid	DI Leach	
890-4951-2	BES23-57 0.5'	Soluble	Solid	DI Leach	
890-4951-3	BES23-58 0.5'	Soluble	Solid	DI Leach	
890-4951-4	BES23-59 0.5'	Soluble	Solid	DI Leach	
MB 880-57875/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-57875/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-57875/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-4950-A-46-B MS	Matrix Spike	Soluble	Solid	DI Leach	
890-4950-A-46-C MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	

Leach Batch: 57911

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4951-5	BES23-60 0.5'	Soluble	Solid	DI Leach	
890-4951-6	BES23-61 0.5'	Soluble	Solid	DI Leach	
890-4951-7	BES23-62 0.5'	Soluble	Solid	DI Leach	
890-4951-8	BES23-63 0.5'	Soluble	Solid	DI Leach	
890-4951-9	BES23-64 0.5'	Soluble	Solid	DI Leach	
890-4951-10	WES23-01 0.5'	Soluble	Solid	DI Leach	
890-4951-11	WES23-02 0.5'	Soluble	Solid	DI Leach	
890-4951-12	WES23-03 0.5'	Soluble	Solid	DI Leach	
890-4951-13	WES23-04 0.5'	Soluble	Solid	DI Leach	
890-4951-14	WES23-05 0.5'	Soluble	Solid	DI Leach	
890-4951-15	WES23-06 0.5'	Soluble	Solid	DI Leach	
MB 880-57911/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-57911/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-57911/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-4951-5 MS	BES23-60 0.5'	Soluble	Solid	DI Leach	
890-4951-5 MSD	BES23-60 0.5'	Soluble	Solid	DI Leach	
890-4951-15 MS	WES23-06 0.5'	Soluble	Solid	DI Leach	
890-4951-15 MSD	WES23-06 0.5'	Soluble	Solid	DI Leach	

Analysis Batch: 58007

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4951-1	BES23-56 0.5'	Soluble	Solid	300.0	57875
890-4951-2	BES23-57 0.5'	Soluble	Solid	300.0	57875
890-4951-3	BES23-58 0.5'	Soluble	Solid	300.0	57875
890-4951-4	BES23-59 0.5'	Soluble	Solid	300.0	57875
MB 880-57875/1-A	Method Blank	Soluble	Solid	300.0	57875
LCS 880-57875/2-A	Lab Control Sample	Soluble	Solid	300.0	57875
LCSD 880-57875/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	57875

QC Association Summary

Client: Vertex
Project/Site: Corral Fly

Job ID: 890-4951-1
SDG: 23E-02502

HPLC/IC (Continued)

Analysis Batch: 58007 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4950-A-46-B MS	Matrix Spike	Soluble	Solid	300.0	57875
890-4950-A-46-C MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	57875

Analysis Batch: 58043

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4951-5	BES23-60 0.5'	Soluble	Solid	300.0	57911
890-4951-6	BES23-61 0.5'	Soluble	Solid	300.0	57911
890-4951-7	BES23-62 0.5'	Soluble	Solid	300.0	57911
890-4951-8	BES23-63 0.5'	Soluble	Solid	300.0	57911
890-4951-9	BES23-64 0.5'	Soluble	Solid	300.0	57911
890-4951-10	WES23-01 0.5'	Soluble	Solid	300.0	57911
890-4951-11	WES23-02 0.5'	Soluble	Solid	300.0	57911
890-4951-12	WES23-03 0.5'	Soluble	Solid	300.0	57911
890-4951-13	WES23-04 0.5'	Soluble	Solid	300.0	57911
890-4951-14	WES23-05 0.5'	Soluble	Solid	300.0	57911
890-4951-15	WES23-06 0.5'	Soluble	Solid	300.0	57911
MB 880-57911/1-A	Method Blank	Soluble	Solid	300.0	57911
LCS 880-57911/2-A	Lab Control Sample	Soluble	Solid	300.0	57911
LCSD 880-57911/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	57911
890-4951-5 MS	BES23-60 0.5'	Soluble	Solid	300.0	57911
890-4951-5 MSD	BES23-60 0.5'	Soluble	Solid	300.0	57911
890-4951-15 MS	WES23-06 0.5'	Soluble	Solid	300.0	57911
890-4951-15 MSD	WES23-06 0.5'	Soluble	Solid	300.0	57911

Lab Chronicle

Client: Vertex
Project/Site: Corral Fly

Job ID: 890-4951-1
SDG: 23E-02502

Client Sample ID: BES23-56 0.5'

Lab Sample ID: 890-4951-1
Matrix: Solid
Date Collected: 07/14/23 10:00
Date Received: 07/14/23 15:02

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.95 g	5 mL	58056	07/19/23 15:10	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	58285	07/24/23 02:10	SM	EET MID
Total/NA	Analysis	Total BTEX		1			58312	07/24/23 11:25	SM	EET MID
Total/NA	Analysis	8015 NM		1			58919	07/31/23 16:01	AJ	EET MID
Total/NA	Prep	8015NM Prep			9.99 g	10 mL	58405	07/24/23 17:37	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	58792	07/30/23 16:04	AJ	EET MID
Soluble	Leach	DI Leach			5 g	50 mL	57875	07/17/23 15:01	KS	EET MID
Soluble	Analysis	300.0		5			58007	07/19/23 10:31	CH	EET MID

Client Sample ID: BES23-57 0.5'

Lab Sample ID: 890-4951-2
Matrix: Solid
Date Collected: 07/14/23 10:05
Date Received: 07/14/23 15:02

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	58056	07/19/23 15:10	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	58285	07/24/23 02:31	SM	EET MID
Total/NA	Analysis	Total BTEX		1			58312	07/24/23 11:25	SM	EET MID
Total/NA	Analysis	8015 NM		1			58919	07/31/23 16:01	AJ	EET MID
Total/NA	Prep	8015NM Prep			9.95 g	10 mL	58405	07/24/23 17:37	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	58792	07/30/23 16:26	AJ	EET MID
Soluble	Leach	DI Leach			5.04 g	50 mL	57875	07/17/23 15:01	KS	EET MID
Soluble	Analysis	300.0		10			58007	07/19/23 10:36	CH	EET MID

Client Sample ID: BES23-58 0.5'

Lab Sample ID: 890-4951-3
Matrix: Solid
Date Collected: 07/14/23 10:10
Date Received: 07/14/23 15:02

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	58056	07/19/23 15:10	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	58285	07/24/23 02:51	SM	EET MID
Total/NA	Analysis	Total BTEX		1			58312	07/24/23 11:25	SM	EET MID
Total/NA	Analysis	8015 NM		1			58919	07/31/23 16:01	AJ	EET MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	58405	07/24/23 17:37	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	58792	07/30/23 16:48	AJ	EET MID
Soluble	Leach	DI Leach			4.95 g	50 mL	57875	07/17/23 15:01	KS	EET MID
Soluble	Analysis	300.0		10			58007	07/19/23 10:41	CH	EET MID

Client Sample ID: BES23-59 0.5'

Lab Sample ID: 890-4951-4
Matrix: Solid
Date Collected: 07/14/23 10:15
Date Received: 07/14/23 15:02

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.04 g	5 mL	58056	07/19/23 15:10	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	58285	07/24/23 03:12	SM	EET MID
Total/NA	Analysis	Total BTEX		1			58312	07/24/23 11:25	SM	EET MID

Eurofins Carlsbad

Lab Chronicle

Client: Vertex
Project/Site: Corral Fly

Job ID: 890-4951-1
SDG: 23E-02502

Client Sample ID: BES23-59 0.5'

Lab Sample ID: 890-4951-4
Matrix: Solid
Date Collected: 07/14/23 10:15
Date Received: 07/14/23 15:02

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			58919	07/31/23 16:01	AJ	EET MID
Total/NA	Prep	8015NM Prep			9.98 g	10 mL	58405	07/24/23 17:37	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	58792	07/30/23 17:10	AJ	EET MID
Soluble	Leach	DI Leach			4.98 g	50 mL	57875	07/17/23 15:01	KS	EET MID
Soluble	Analysis	300.0		10			58007	07/19/23 10:46	CH	EET MID

Client Sample ID: BES23-60 0.5'

Lab Sample ID: 890-4951-5
Matrix: Solid
Date Collected: 07/14/23 10:20
Date Received: 07/14/23 15:02

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.00 g	5 mL	58056	07/19/23 15:10	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	58285	07/24/23 03:32	SM	EET MID
Total/NA	Analysis	Total BTEX		1			58312	07/24/23 11:25	SM	EET MID
Total/NA	Analysis	8015 NM		1			58919	07/31/23 16:01	AJ	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	58405	07/24/23 17:37	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	58792	07/30/23 17:32	AJ	EET MID
Soluble	Leach	DI Leach			4.99 g	50 mL	57911	07/18/23 09:24	KS	EET MID
Soluble	Analysis	300.0		5			58043	07/19/23 11:28	CH	EET MID

Client Sample ID: BES23-61 0.5'

Lab Sample ID: 890-4951-6
Matrix: Solid
Date Collected: 07/14/23 10:25
Date Received: 07/14/23 15:02

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	58056	07/19/23 15:10	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	58285	07/24/23 03:53	SM	EET MID
Total/NA	Analysis	Total BTEX		1			58312	07/24/23 11:25	SM	EET MID
Total/NA	Analysis	8015 NM		1			58919	07/31/23 16:01	AJ	EET MID
Total/NA	Prep	8015NM Prep			10.10 g	10 mL	58405	07/24/23 17:37	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	58792	07/30/23 17:55	AJ	EET MID
Soluble	Leach	DI Leach			5.02 g	50 mL	57911	07/18/23 09:24	KS	EET MID
Soluble	Analysis	300.0		10			58043	07/19/23 11:43	CH	EET MID

Client Sample ID: BES23-62 0.5'

Lab Sample ID: 890-4951-7
Matrix: Solid
Date Collected: 07/14/23 10:30
Date Received: 07/14/23 15:02

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	58056	07/19/23 15:10	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	58285	07/24/23 04:13	SM	EET MID
Total/NA	Analysis	Total BTEX		1			58312	07/24/23 11:25	SM	EET MID
Total/NA	Analysis	8015 NM		1			58919	07/31/23 16:01	AJ	EET MID
Total/NA	Prep	8015NM Prep			10.10 g	10 mL	58405	07/24/23 17:37	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	58792	07/30/23 18:17	AJ	EET MID

Lab Chronicle

Client: Vertex
Project/Site: Corral Fly

Job ID: 890-4951-1
SDG: 23E-02502

Client Sample ID: BES23-62 0.5'

Lab Sample ID: 890-4951-7
Matrix: Solid
Date Collected: 07/14/23 10:30
Date Received: 07/14/23 15:02

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	57911	07/18/23 09:24	KS	EET MID
Soluble	Analysis	300.0		5			58043	07/19/23 11:48	CH	EET MID

Client Sample ID: BES23-63 0.5'

Lab Sample ID: 890-4951-8
Matrix: Solid
Date Collected: 07/14/23 10:35
Date Received: 07/14/23 15:02

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	58056	07/19/23 15:10	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	58285	07/24/23 04:33	SM	EET MID
Total/NA	Analysis	Total BTEX		1			58312	07/24/23 11:25	SM	EET MID
Total/NA	Analysis	8015 NM		1			58919	07/31/23 16:01	AJ	EET MID
Total/NA	Prep	8015NM Prep			9.94 g	10 mL	58405	07/24/23 17:37	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	58792	07/30/23 18:39	AJ	EET MID
Soluble	Leach	DI Leach			4.98 g	50 mL	57911	07/18/23 09:24	KS	EET MID
Soluble	Analysis	300.0		1			58043	07/19/23 11:54	CH	EET MID

Client Sample ID: BES23-64 0.5'

Lab Sample ID: 890-4951-9
Matrix: Solid
Date Collected: 07/14/23 10:40
Date Received: 07/14/23 15:02

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	58056	07/19/23 15:10	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	58285	07/24/23 04:54	SM	EET MID
Total/NA	Analysis	Total BTEX		1			58312	07/24/23 11:25	SM	EET MID
Total/NA	Analysis	8015 NM		1			58919	07/31/23 16:01	AJ	EET MID
Total/NA	Prep	8015NM Prep			9.92 g	10 mL	58405	07/24/23 17:37	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	58792	07/30/23 19:02	AJ	EET MID
Soluble	Leach	DI Leach			5.05 g	50 mL	57911	07/18/23 09:24	KS	EET MID
Soluble	Analysis	300.0		1			58043	07/19/23 11:59	CH	EET MID

Client Sample ID: WES23-01 0.5'

Lab Sample ID: 890-4951-10
Matrix: Solid
Date Collected: 07/14/23 10:45
Date Received: 07/14/23 15:02

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.04 g	5 mL	58056	07/19/23 15:10	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	58285	07/24/23 05:14	SM	EET MID
Total/NA	Analysis	Total BTEX		1			58312	07/24/23 11:25	SM	EET MID
Total/NA	Analysis	8015 NM		1			58919	07/31/23 16:01	AJ	EET MID
Total/NA	Prep	8015NM Prep			10.08 g	10 mL	58406	07/24/23 17:42	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	58792	07/30/23 22:01	AJ	EET MID
Soluble	Leach	DI Leach			4.96 g	50 mL	57911	07/18/23 09:24	KS	EET MID
Soluble	Analysis	300.0		10			58043	07/19/23 12:35	CH	EET MID

Lab Chronicle

Client: Vertex
Project/Site: Corral Fly

Job ID: 890-4951-1
SDG: 23E-02502

Client Sample ID: WES23-02 0.5'

Lab Sample ID: 890-4951-11
Matrix: Solid
Date Collected: 07/14/23 10:50
Date Received: 07/14/23 15:02

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	58151	07/20/23 13:55	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	58250	07/22/23 18:02	SM	EET MID
Total/NA	Analysis	Total BTEX		1			58312	07/24/23 09:06	SM	EET MID
Total/NA	Analysis	8015 NM		1			58919	07/31/23 16:01	AJ	EET MID
Total/NA	Prep	8015NM Prep			10.00 g	10 mL	58406	07/24/23 17:42	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	58792	07/30/23 22:23	AJ	EET MID
Soluble	Leach	DI Leach			5.01 g	50 mL	57911	07/18/23 09:24	KS	EET MID
Soluble	Analysis	300.0		1			58043	07/19/23 12:40	CH	EET MID

Client Sample ID: WES23-03 0.5'

Lab Sample ID: 890-4951-12
Matrix: Solid
Date Collected: 07/14/23 10:55
Date Received: 07/14/23 15:02

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	58151	07/20/23 13:55	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	58250	07/22/23 18:22	SM	EET MID
Total/NA	Analysis	Total BTEX		1			58312	07/24/23 09:06	SM	EET MID
Total/NA	Analysis	8015 NM		1			58919	07/31/23 16:01	AJ	EET MID
Total/NA	Prep	8015NM Prep			9.94 g	10 mL	58406	07/24/23 17:42	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	58792	07/30/23 20:55	AJ	EET MID
Soluble	Leach	DI Leach			5.02 g	50 mL	57911	07/18/23 09:24	KS	EET MID
Soluble	Analysis	300.0		5			58043	07/19/23 12:45	CH	EET MID

Client Sample ID: WES23-04 0.5'

Lab Sample ID: 890-4951-13
Matrix: Solid
Date Collected: 07/14/23 11:00
Date Received: 07/14/23 15:02

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	58151	07/20/23 13:55	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	58250	07/22/23 18:43	SM	EET MID
Total/NA	Analysis	Total BTEX		1			58312	07/24/23 09:06	SM	EET MID
Total/NA	Analysis	8015 NM		1			58919	07/31/23 16:01	AJ	EET MID
Total/NA	Prep	8015NM Prep			9.91 g	10 mL	58406	07/24/23 17:42	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	58792	07/30/23 22:46	AJ	EET MID
Soluble	Leach	DI Leach			5.04 g	50 mL	57911	07/18/23 09:24	KS	EET MID
Soluble	Analysis	300.0		10			58043	07/19/23 12:50	CH	EET MID

Client Sample ID: WES23-05 0.5'

Lab Sample ID: 890-4951-14
Matrix: Solid
Date Collected: 07/14/23 11:05
Date Received: 07/14/23 15:02

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.00 g	5 mL	58151	07/20/23 13:55	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	58250	07/22/23 19:03	SM	EET MID
Total/NA	Analysis	Total BTEX		1			58312	07/24/23 09:06	SM	EET MID

Lab Chronicle

Client: Vertex
Project/Site: Corral Fly

Job ID: 890-4951-1
SDG: 23E-02502

Client Sample ID: WES23-05 0.5'

Lab Sample ID: 890-4951-14
Matrix: Solid
Date Collected: 07/14/23 11:05
Date Received: 07/14/23 15:02

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			58919	07/31/23 16:01	AJ	EET MID
Total/NA	Prep	8015NM Prep			9.96 g	10 mL	58406	07/24/23 17:42	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	58792	07/30/23 23:08	AJ	EET MID
Soluble	Leach	DI Leach			4.98 g	50 mL	57911	07/18/23 09:24	KS	EET MID
Soluble	Analysis	300.0		1			58043	07/19/23 12:55	CH	EET MID

Client Sample ID: WES23-06 0.5'

Lab Sample ID: 890-4951-15
Matrix: Solid
Date Collected: 07/14/23 11:10
Date Received: 07/14/23 15:02

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	58151	07/20/23 13:55	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	58250	07/22/23 19:24	SM	EET MID
Total/NA	Analysis	Total BTEX		1			58312	07/24/23 09:06	SM	EET MID
Total/NA	Analysis	8015 NM		1			58919	07/31/23 16:01	AJ	EET MID
Total/NA	Prep	8015NM Prep			9.93 g	10 mL	58406	07/24/23 17:42	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	58792	07/30/23 23:30	AJ	EET MID
Soluble	Leach	DI Leach			5.03 g	50 mL	57911	07/18/23 09:24	KS	EET MID
Soluble	Analysis	300.0		1			58043	07/19/23 13:00	CH	EET MID

Laboratory References:

EET MID = Eurofins Midland, 1211 W. Florida Ave, Midland, TX 79701, TEL (432)704-5440

Accreditation/Certification Summary

Client: Vertex
Project/Site: Corral Fly

Job ID: 890-4951-1
SDG: 23E-02502

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	T104704400-23-26	06-30-24

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: Vertex
Project/Site: Corral Fly

Job ID: 890-4951-1
SDG: 23E-02502

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	EPA	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

EPA = US Environmental Protection Agency

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: Vertex
Project/Site: Corral Fly

Job ID: 890-4951-1
SDG: 23E-02502

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-4951-1	BES23-56 0.5'	Solid	07/14/23 10:00	07/14/23 15:02	0.5
890-4951-2	BES23-57 0.5'	Solid	07/14/23 10:05	07/14/23 15:02	0.5
890-4951-3	BES23-58 0.5'	Solid	07/14/23 10:10	07/14/23 15:02	0.5
890-4951-4	BES23-59 0.5'	Solid	07/14/23 10:15	07/14/23 15:02	0.5
890-4951-5	BES23-60 0.5'	Solid	07/14/23 10:20	07/14/23 15:02	0.5
890-4951-6	BES23-61 0.5'	Solid	07/14/23 10:25	07/14/23 15:02	0.5
890-4951-7	BES23-62 0.5'	Solid	07/14/23 10:30	07/14/23 15:02	0.5
890-4951-8	BES23-63 0.5'	Solid	07/14/23 10:35	07/14/23 15:02	0.5
890-4951-9	BES23-64 0.5'	Solid	07/14/23 10:40	07/14/23 15:02	0.5
890-4951-10	WES23-01 0.5'	Solid	07/14/23 10:45	07/14/23 15:02	0.5
890-4951-11	WES23-02 0.5'	Solid	07/14/23 10:50	07/14/23 15:02	0.5
890-4951-12	WES23-03 0.5'	Solid	07/14/23 10:55	07/14/23 15:02	0.5
890-4951-13	WES23-04 0.5'	Solid	07/14/23 11:00	07/14/23 15:02	0.5
890-4951-14	WES23-05 0.5'	Solid	07/14/23 11:05	07/14/23 15:02	0.5
890-4951-15	WES23-06 0.5'	Solid	07/14/23 11:10	07/14/23 15:02	0.5

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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:	Chance Dixon	Bill to: (if different)	Rob Kirk
Company Name:	Vertex	Company Name:	Solaris
Address:		Address:	
City, State ZIP:		City, State ZIP:	
Phone:	Email:	cdixon@vertex.ca	

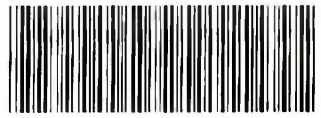
Work Order Comments

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:	Corral Fly	Turn Around	☒ Routine ☐ Rush
Project Number:	23E-02502		
Project Location:		Due Date:	
Sampler's Name:	Hunter Klein	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:	IRm007
Cooler Custody Seals:	Yes No N/A	Correction Factor:	-0.2
Sample Custody Seals:	Yes No (N/A)	Temperature Reading:	11.2
Total Containers:		Corrected Temperature:	11.0

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

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Grab/ Comp	# of Cont	Parameters: TPH	BTEX	Cl	Sample Comments
BES23-56 0.5'	Soil	7/14/23	10:00			5	X	X	X	
BES23-57 0.5'			10:05							
BES23-58 0.5'			10:10							
BES23-59 0.5'			10:15							
BES23-60 0.5'			10:20							
BES23-61 0.5'			10:25							
BES23-62 0.5'			10:30							
BES23-63 0.5'			10:35							
BES23-64 0.5'			10:40							
WES23-01 0.5'			10:45							

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	Hunter Klein		7.14.23 1502			
3				4		
5				6		

Revised Date: 08/25/2020 Rev. 2020.2

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Released to Imaging: 7/26/2024 3:59:45 PM

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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
www.xenco.com

Work Order No: _____

Project Manager:	Chance Dixon	Bill to: (if different)	Rob Kirk
Company Name:	Vertex	Company Name:	Solaris
Address:		Address:	
City, State ZIP:		City, State ZIP:	
Phone:		Email:	cdixon@vertex.ca

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:	Corral Fly	Turn Around	☒ Routine ☐ Rush
Project Number:	23E-02502		
Project Location:		Due Date:	
Sampler's Name:	Hunter Klein	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:		
Cooler Custody Seals:	Yes No N/A	Correction Factor:		
Sample Custody Seals:	Yes No N/A	Temperature Reading:		
Total Containers:		Corrected Temperature:		

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

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Grab/ Comp	# of Cont	Pres. Code	TPH	BTEX	Cl	Sample Comments
WES23-02 0.5'	Soil	7/14/23	10:50			5		X	X	X	
WES23-03 0.5'			10:55								
WES23-04 0.5'			11:00								
WES23-05 0.5'			11:05								
WES23-06 0.5'			11:10								

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 Hunter Klein	Cloe Cuf	7.14.23 1502			
3			4		
5			6		

Revised Date: 08/25/2020 Rev. 2020.2

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Received by OCD: 7/24/2024 3:24:20 PM

Released to Imaging: 7/26/2024 3:59:45 PM

Login Sample Receipt Checklist

Client: Vertex

Job Number: 890-4951-1
SDG Number: 23E-02502

Login Number: 4951
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: Vertex

Job Number: 890-4951-1
SDG Number: 23E-02502

Login Number: 4951
List Number: 2
Creator: Rodriguez, Leticia

List Source: Eurofins Midland
List Creation: 07/18/23 11:21 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	

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ANALYTICAL REPORT

PREPARED FOR

Attn: Chance Dixon
Vertex
3101 Boyd Dr
Carlsbad, New Mexico 88220

Generated 8/10/2023 3:08:04 PM

JOB DESCRIPTION

Corral Fly SWD
SDG NUMBER 23E-02502

JOB NUMBER

890-5046-1

Eurofins Carlsbad
1089 N Canal St.
Carlsbad NM 88220

See page two for job notes and contact information.

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my EOL

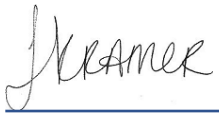
Eurofins Carlsbad

Job Notes

This report may not be reproduced except in full, and with written approval from the laboratory. The results relate only to the samples tested. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

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



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8/10/2023 3:08:04 PM

Authorized for release by
Jessica Kramer, Project Manager
Jessica.Kramer@et.eurofinsus.com
(432)704-5440

Client: Vertex
Project/Site: Corral Fly SWD

Laboratory Job ID: 890-5046-1
SDG: 23E-02502

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Definitions/Glossary

Client: Vertex
Project/Site: Corral Fly SWD

Job ID: 890-5046-1
SDG: 23E-02502

Qualifiers

GC VOA

Qualifier	Qualifier Description
*+	LCS and/or LCSD is outside acceptance limits, high biased.
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, 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: Vertex
Project/Site: Corral Fly SWD

Job ID: 890-5046-1
SDG: 23E-02502

Job ID: 890-5046-1

Laboratory: Eurofins Carlsbad

Narrative

Job Narrative
890-5046-1

Receipt
The samples were received on 8/7/2023 4:12 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 3.8°C

Receipt Exceptions
The following samples were received and analyzed from an unpreserved bulk soil jar: BS23-15 1FT (890-5046-1), BS23-19 1FT (890-5046-2), BS23-32 1FT (890-5046-3), BS23-34 1FT (890-5046-4) and BS23-38 1FT (890-5046-5).

GC VOA
Method 8021B: Surrogate recovery for the following samples were outside control limits: BS23-15 1FT (890-5046-1), BS23-19 1FT (890-5046-2), BS23-32 1FT (890-5046-3), BS23-34 1FT (890-5046-4) and BS23-38 1FT (890-5046-5). Evidence of matrix interferences is not obvious.

Method 8021B: CCV was biased high for ethylbenzene, o-xylene, and m,p xylenes. Another CCV was analyzed and acceptable within 12 hours; therefore, the data was qualified and reported.(CCV 880-59696/51)

Method 8021B: The continuing calibration verification (CCV) associated with batch 880-59696 recovered above the upper control limit for Benzene. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. The associated sample is impacted: (CCV 880-59696/33).

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: Vertex
Project/Site: Corral Fly SWD

Job ID: 890-5046-1
SDG: 23E-02502

Client Sample ID: BS23-15 1FT

Lab Sample ID: 890-5046-1
Matrix: Solid
Date Collected: 08/07/23 10:00
Date Received: 08/07/23 16:12
Sample Depth: 1

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		08/09/23 13:14	08/09/23 23:48	1
Ethylbenzene	<0.00201	U *+	0.00201		mg/Kg		08/09/23 13:14	08/09/23 23:48	1
Toluene	<0.00201	U	0.00201		mg/Kg		08/09/23 13:14	08/09/23 23:48	1
Xylenes, Total	<0.00402	U *+	0.00402		mg/Kg		08/09/23 13:14	08/09/23 23:48	1
m-Xylene & p-Xylene	<0.00402	U *+	0.00402		mg/Kg		08/09/23 13:14	08/09/23 23:48	1
o-Xylene	<0.00201	U *+	0.00201		mg/Kg		08/09/23 13:14	08/09/23 23:48	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*83*		*70 - 130*	*08/09/23 13:14*	*08/09/23 23:48*	*1*
1,4-Difluorobenzene (Surr)	*69*	*S1-*	*70 - 130*	*08/09/23 13:14*	*08/09/23 23:48*	*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			08/10/23 10:23	1

Method: SW846 8015 NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**52.2**		50.4		mg/Kg			08/10/23 15:56	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	<50.4	U	50.4		mg/Kg		08/07/23 18:03	08/10/23 12:40	1
Diesel Range Organics (Over C10-C28)	**52.2**		50.4		mg/Kg		08/07/23 18:03	08/10/23 12:40	1
OII Range Organics (Over C28-C36)	<50.4	U	50.4		mg/Kg		08/07/23 18:03	08/10/23 12:40	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*123*		*70 - 130*	*08/07/23 18:03*	*08/10/23 12:40*	*1*
o-Terphenyl	*102*		*70 - 130*	*08/07/23 18:03*	*08/10/23 12:40*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**1380**		25.0		mg/Kg			08/09/23 17:18	5

Client Sample ID: BS23-19 1FT

Lab Sample ID: 890-5046-2
Matrix: Solid
Date Collected: 08/07/23 10:05
Date Received: 08/07/23 16:12
Sample Depth: 1

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		08/09/23 13:14	08/10/23 00:09	1
Ethylbenzene	<0.00200	U *+	0.00200		mg/Kg		08/09/23 13:14	08/10/23 00:09	1
Toluene	<0.00200	U	0.00200		mg/Kg		08/09/23 13:14	08/10/23 00:09	1
Xylenes, Total	<0.00401	U *+	0.00401		mg/Kg		08/09/23 13:14	08/10/23 00:09	1
m-Xylene & p-Xylene	<0.00401	U *+	0.00401		mg/Kg		08/09/23 13:14	08/10/23 00:09	1
o-Xylene	<0.00200	U *+	0.00200		mg/Kg		08/09/23 13:14	08/10/23 00:09	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*89*		*70 - 130*	*08/09/23 13:14*	*08/10/23 00:09*	*1*

Eurofins Carlsbad

Client Sample Results

Client: Vertex
Project/Site: Corral Fly SWD

Job ID: 890-5046-1
SDG: 23E-02502

Client Sample ID: BS23-19 1FT

Lab Sample ID: 890-5046-2
Matrix: Solid
Date Collected: 08/07/23 10:05
Date Received: 08/07/23 16:12
Sample Depth: 1

Method: SW846 8021B - Volatile Organic Compounds (GC) (Continued)

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Difluorobenzene (Surr)	*52*	*S1-*	*70 - 130*	*08/09/23 13:14*	*08/10/23 00:09*	*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			08/10/23 10:23	1

Method: SW846 8015 NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.7	U	49.7		mg/Kg			08/10/23 15:56	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	<49.7	U	49.7		mg/Kg		08/07/23 18:03	08/10/23 13:02	1
Diesel Range Organics (Over C10-C28)	<49.7	U	49.7		mg/Kg		08/07/23 18:03	08/10/23 13:02	1
OII Range Organics (Over C28-C36)	<49.7	U	49.7		mg/Kg		08/07/23 18:03	08/10/23 13:02	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*144*	*S1+*	*70 - 130*	*08/07/23 18:03*	*08/10/23 13:02*	*1*
o-Terphenyl	*118*		*70 - 130*	*08/07/23 18:03*	*08/10/23 13:02*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**352**		5.00		mg/Kg			08/09/23 17:35	1

Client Sample ID: BS23-32 1FT

Lab Sample ID: 890-5046-3
Matrix: Solid
Date Collected: 08/07/23 10:10
Date Received: 08/07/23 16:12
Sample Depth: 1

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		08/09/23 13:14	08/10/23 00:29	1
Ethylbenzene	<0.00199	U *+	0.00199		mg/Kg		08/09/23 13:14	08/10/23 00:29	1
Toluene	<0.00199	U	0.00199		mg/Kg		08/09/23 13:14	08/10/23 00:29	1
Xylenes, Total	<0.00398	U *+	0.00398		mg/Kg		08/09/23 13:14	08/10/23 00:29	1
m-Xylene & p-Xylene	<0.00398	U *+	0.00398		mg/Kg		08/09/23 13:14	08/10/23 00:29	1
o-Xylene	<0.00199	U *+	0.00199		mg/Kg		08/09/23 13:14	08/10/23 00:29	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*90*		*70 - 130*	*08/09/23 13:14*	*08/10/23 00:29*	*1*
1,4-Difluorobenzene (Surr)	*52*	*S1-*	*70 - 130*	*08/09/23 13:14*	*08/10/23 00:29*	*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			08/10/23 10:23	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			08/10/23 15:56	1

Client Sample Results

Client: Vertex
Project/Site: Corral Fly SWD

Job ID: 890-5046-1
SDG: 23E-02502

Client Sample ID: BS23-32 1FT

Lab Sample ID: 890-5046-3
Matrix: Solid
Date Collected: 08/07/23 10:10
Date Received: 08/07/23 16:12
Sample Depth: 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		08/07/23 18:03	08/10/23 13:24	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		08/07/23 18:03	08/10/23 13:24	1
OII Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		08/07/23 18:03	08/10/23 13:24	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*113*		*70 - 130*	*08/07/23 18:03*	*08/10/23 13:24*	*1*
o-Terphenyl	*96*		*70 - 130*	*08/07/23 18:03*	*08/10/23 13:24*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**3250**		24.8		mg/Kg			08/09/23 17:41	5

Client Sample ID: BS23-34 1FT

Lab Sample ID: 890-5046-4
Matrix: Solid
Date Collected: 08/07/23 10:15
Date Received: 08/07/23 16:12
Sample Depth: 1

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		08/09/23 13:14	08/10/23 00:50	1
Ethylbenzene	<0.00200	U *+	0.00200		mg/Kg		08/09/23 13:14	08/10/23 00:50	1
Toluene	<0.00200	U	0.00200		mg/Kg		08/09/23 13:14	08/10/23 00:50	1
Xylenes, Total	<0.00400	U *+	0.00400		mg/Kg		08/09/23 13:14	08/10/23 00:50	1
m-Xylene & p-Xylene	<0.00400	U *+	0.00400		mg/Kg		08/09/23 13:14	08/10/23 00:50	1
o-Xylene	<0.00200	U *+	0.00200		mg/Kg		08/09/23 13:14	08/10/23 00:50	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*85*		*70 - 130*	*08/09/23 13:14*	*08/10/23 00:50*	*1*
1,4-Difluorobenzene (Surr)	*65*	*S1-*	*70 - 130*	*08/09/23 13:14*	*08/10/23 00:50*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00400	U	0.00400		mg/Kg			08/10/23 10:23	1

Method: SW846 8015 NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.6	U	49.6		mg/Kg			08/10/23 15:56	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	<49.6	U	49.6		mg/Kg		08/07/23 18:03	08/10/23 13:46	1
Diesel Range Organics (Over C10-C28)	<49.6	U	49.6		mg/Kg		08/07/23 18:03	08/10/23 13:46	1
OII Range Organics (Over C28-C36)	<49.6	U	49.6		mg/Kg		08/07/23 18:03	08/10/23 13:46	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*114*		*70 - 130*	*08/07/23 18:03*	*08/10/23 13:46*	*1*
o-Terphenyl	*98*		*70 - 130*	*08/07/23 18:03*	*08/10/23 13:46*	*1*

Client Sample Results

Client: Vertex
Project/Site: Corral Fly SWD

Job ID: 890-5046-1
SDG: 23E-02502

Client Sample ID: BS23-34 1FT

Lab Sample ID: 890-5046-4
Matrix: Solid
Date Collected: 08/07/23 10:15
Date Received: 08/07/23 16:12
Sample Depth: 1

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**3660**		25.1		mg/Kg			08/09/23 17:46	5

Client Sample ID: BS23-38 1FT

Lab Sample ID: 890-5046-5
Matrix: Solid
Date Collected: 08/07/23 10:20
Date Received: 08/07/23 16:12
Sample Depth: 1

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00198	U *+	0.00198		mg/Kg		08/09/23 13:14	08/10/23 01:10	1
Ethylbenzene	<0.00198	U *+	0.00198		mg/Kg		08/09/23 13:14	08/10/23 01:10	1
Toluene	<0.00198	U	0.00198		mg/Kg		08/09/23 13:14	08/10/23 01:10	1
Xylenes, Total	<0.00396	U *+	0.00396		mg/Kg		08/09/23 13:14	08/10/23 01:10	1
m-Xylene & p-Xylene	<0.00396	U *+	0.00396		mg/Kg		08/09/23 13:14	08/10/23 01:10	1
o-Xylene	<0.00198	U *+	0.00198		mg/Kg		08/09/23 13:14	08/10/23 01:10	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*85*		*70 - 130*	*08/09/23 13:14*	*08/10/23 01:10*	*1*
1,4-Difluorobenzene (Surr)	*64*	*S1-*	*70 - 130*	*08/09/23 13:14*	*08/10/23 01:10*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00396	U	0.00396		mg/Kg			08/10/23 10:23	1

Method: SW846 8015 NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**272**		49.7		mg/Kg			08/10/23 15:56	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	<49.7	U	49.7		mg/Kg		08/07/23 18:03	08/10/23 14:08	1
Diesel Range Organics (Over C10-C28)	**272**		49.7		mg/Kg		08/07/23 18:03	08/10/23 14:08	1
OII Range Organics (Over C28-C36)	<49.7	U	49.7		mg/Kg		08/07/23 18:03	08/10/23 14:08	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*116*		*70 - 130*	*08/07/23 18:03*	*08/10/23 14:08*	*1*
o-Terphenyl	*94*		*70 - 130*	*08/07/23 18:03*	*08/10/23 14:08*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**4640**		49.9		mg/Kg			08/09/23 17:52	10

Surrogate Summary

Client: Vertex
Project/Site: Corral Fly SWD

Job ID: 890-5046-1
SDG: 23E-02502

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)
890-5046-1	BS23-15 1FT	83	69 S1-
890-5046-1 MS	BS23-15 1FT	122	106
890-5046-1 MSD	BS23-15 1FT	125	106
890-5046-2	BS23-19 1FT	89	52 S1-
890-5046-3	BS23-32 1FT	90	52 S1-
890-5046-4	BS23-34 1FT	85	65 S1-
890-5046-5	BS23-38 1FT	85	64 S1-
LCS 880-59759/1-A	Lab Control Sample	122	108
LCSD 880-59759/2-A	Lab Control Sample Dup	129	105
MB 880-59705/5-A	Method Blank	72	81
MB 880-59759/5-A	Method Blank	70	84

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)
880-31731-A-1-F MS	Matrix Spike	104	83
880-31731-A-1-G MSD	Matrix Spike Duplicate	103	83
890-5046-1	BS23-15 1FT	123	102
890-5046-2	BS23-19 1FT	144 S1+	118
890-5046-3	BS23-32 1FT	113	96
890-5046-4	BS23-34 1FT	114	98
890-5046-5	BS23-38 1FT	116	94
LCS 880-59575/2-A	Lab Control Sample	140 S1+	123
LCSD 880-59575/3-A	Lab Control Sample Dup	153 S1+	135 S1+
MB 880-59575/1-A	Method Blank	155 S1+	141 S1+

Surrogate Legend

1CO = 1-Chlorooctane
OTPH = o-Terphenyl

QC Sample Results

Client: Vertex
Project/Site: Corral Fly SWD

Job ID: 890-5046-1
SDG: 23E-02502

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-59705/5-A
Matrix: Solid
Analysis Batch: 59696

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 59705

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		08/09/23 09:11	08/09/23 12:49	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		08/09/23 09:11	08/09/23 12:49	1
Toluene	<0.00200	U	0.00200		mg/Kg		08/09/23 09:11	08/09/23 12:49	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		08/09/23 09:11	08/09/23 12:49	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		08/09/23 09:11	08/09/23 12:49	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		08/09/23 09:11	08/09/23 12:49	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*72*		*70 - 130*	*08/09/23 09:11*	*08/09/23 12:49*	*1*
1,4-Difluorobenzene (Surr)	*81*		*70 - 130*	*08/09/23 09:11*	*08/09/23 12:49*	*1*

Lab Sample ID: MB 880-59759/5-A
Matrix: Solid
Analysis Batch: 59696

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 59759

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		08/09/23 13:14	08/09/23 23:27	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		08/09/23 13:14	08/09/23 23:27	1
Toluene	<0.00200	U	0.00200		mg/Kg		08/09/23 13:14	08/09/23 23:27	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		08/09/23 13:14	08/09/23 23:27	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		08/09/23 13:14	08/09/23 23:27	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		08/09/23 13:14	08/09/23 23:27	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*70*		*70 - 130*	*08/09/23 13:14*	*08/09/23 23:27*	*1*
1,4-Difluorobenzene (Surr)	*84*		*70 - 130*	*08/09/23 13:14*	*08/09/23 23:27*	*1*

Lab Sample ID: LCS 880-59759/1-A
Matrix: Solid
Analysis Batch: 59696

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 59759

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	0.100	0.1443	*+	mg/Kg		144	70 - 130
Ethylbenzene	0.100	0.1419	*+	mg/Kg		142	70 - 130
Toluene	0.100	0.1244		mg/Kg		124	70 - 130
m-Xylene & p-Xylene	0.200	0.3079	*+	mg/Kg		154	70 - 130
o-Xylene	0.100	0.1488	*+	mg/Kg		149	70 - 130

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*122*		*70 - 130*
1,4-Difluorobenzene (Surr)	*108*		*70 - 130*

Lab Sample ID: LCSD 880-59759/2-A
Matrix: Solid
Analysis Batch: 59696

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 59759

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	0.100	0.1358	*+	mg/Kg		136	70 - 130	6	35

QC Sample Results

Client: Vertex
Project/Site: Corral Fly SWD

Job ID: 890-5046-1
SDG: 23E-02502

Method: 8021B - Volatile Organic Compounds (GC) (Continued)

Lab Sample ID: LCSD 880-59759/2-A
Matrix: Solid
Analysis Batch: 59696

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 59759

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Ethylbenzene			0.100	0.1210		mg/Kg		121	70 - 130	16	35
Toluene			0.100	0.1220		mg/Kg		122	70 - 130	2	35
m-Xylene & p-Xylene			0.200	0.2533		mg/Kg		127	70 - 130	19	35
o-Xylene			0.100	0.1252		mg/Kg		125	70 - 130	17	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*129*		*70 - 130*
1,4-Difluorobenzene (Surr)	*105*		*70 - 130*

Lab Sample ID: 890-5046-1 MS
Matrix: Solid
Analysis Batch: 59696

Client Sample ID: BS23-15 1FT
Prep Type: Total/NA
Prep Batch: 59759

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	<0.00201	U *+	0.0996	0.1079		mg/Kg		108	70 - 130
Ethylbenzene	<0.00201	U *+	0.0996	0.1041		mg/Kg		105	70 - 130
Toluene	<0.00201	U	0.0996	0.09455		mg/Kg		95	70 - 130
m-Xylene & p-Xylene	<0.00402	U *+	0.199	0.2186		mg/Kg		110	70 - 130
o-Xylene	<0.00201	U *+	0.0996	0.1056		mg/Kg		106	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*122*		*70 - 130*
1,4-Difluorobenzene (Surr)	*106*		*70 - 130*

Lab Sample ID: 890-5046-1 MSD
Matrix: Solid
Analysis Batch: 59696

Client Sample ID: BS23-15 1FT
Prep Type: Total/NA
Prep Batch: 59759

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	<0.00201	U *+	0.0998	0.1212		mg/Kg		121	70 - 130	12	35
Ethylbenzene	<0.00201	U *+	0.0998	0.1165		mg/Kg		117	70 - 130	11	35
Toluene	<0.00201	U	0.0998	0.1036		mg/Kg		104	70 - 130	9	35
m-Xylene & p-Xylene	<0.00402	U *+	0.200	0.2462		mg/Kg		123	70 - 130	12	35
o-Xylene	<0.00201	U *+	0.0998	0.1187		mg/Kg		119	70 - 130	12	35

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*125*		*70 - 130*
1,4-Difluorobenzene (Surr)	*106*		*70 - 130*

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

Lab Sample ID: MB 880-59575/1-A
Matrix: Solid
Analysis Batch: 59807

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 59575

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		08/07/23 18:03	08/10/23 07:26	1

QC Sample Results

Client: Vertex
Project/Site: Corral Fly SWD

Job ID: 890-5046-1
SDG: 23E-02502

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

Lab Sample ID: MB 880-59575/1-A
Matrix: Solid
Analysis Batch: 59807

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 59575

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		08/07/23 18:03	08/10/23 07:26	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		08/07/23 18:03	08/10/23 07:26	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*155*	*S1+*	*70 - 130*	*08/07/23 18:03*	*08/10/23 07:26*	*1*
o-Terphenyl	*141*	*S1+*	*70 - 130*	*08/07/23 18:03*	*08/10/23 07:26*	*1*

Lab Sample ID: LCS 880-59575/2-A
Matrix: Solid
Analysis Batch: 59807

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 59575

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics (GRO)-C6-C10	1000	922.3		mg/Kg		92	70 - 130
Diesel Range Organics (Over C10-C28)	1000	954.2		mg/Kg		95	70 - 130

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1-Chlorooctane	*140*	*S1+*	*70 - 130*
o-Terphenyl	*123*		*70 - 130*

Lab Sample ID: LCSD 880-59575/3-A
Matrix: Solid
Analysis Batch: 59807

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 59575

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	1000	876.4		mg/Kg		88	70 - 130	5	20
Diesel Range Organics (Over C10-C28)	1000	946.5		mg/Kg		95	70 - 130	1	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1-Chlorooctane	*153*	*S1+*	*70 - 130*
o-Terphenyl	*135*	*S1+*	*70 - 130*

Lab Sample ID: 880-31731-A-1-F MS
Matrix: Solid
Analysis Batch: 59807

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 59575

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	995	1234		mg/Kg		122	70 - 130
Diesel Range Organics (Over C10-C28)	<50.0	U	995	1023		mg/Kg		100	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
1-Chlorooctane	*104*		*70 - 130*
o-Terphenyl	*83*		*70 - 130*

QC Sample Results

Client: Vertex
Project/Site: Corral Fly SWD

Job ID: 890-5046-1
SDG: 23E-02502

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

Lab Sample ID: 880-31731-A-1-G MSD
Matrix: Solid
Analysis Batch: 59807

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 59575

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	995	1230		mg/Kg		122	70 - 130	0	20
Diesel Range Organics (Over C10-C28)	<50.0	U	995	1014		mg/Kg		99	70 - 130	1	20

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
1-Chlorooctane	*103*		*70 - 130*
o-Terphenyl	*83*		*70 - 130*

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-59730/1-A
Matrix: Solid
Analysis Batch: 59784

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			08/09/23 17:01	1

Lab Sample ID: LCS 880-59730/2-A
Matrix: Solid
Analysis Batch: 59784

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	250	227.2		mg/Kg		91	90 - 110

Lab Sample ID: LCSD 880-59730/3-A
Matrix: Solid
Analysis Batch: 59784

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	230.5		mg/Kg		92	90 - 110	1	20

Lab Sample ID: 890-5046-1 MS
Matrix: Solid
Analysis Batch: 59784

Client Sample ID: BS23-15 1FT
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	1380		1250	2750		mg/Kg		110	90 - 110

Lab Sample ID: 890-5046-1 MSD
Matrix: Solid
Analysis Batch: 59784

Client Sample ID: BS23-15 1FT
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	1380		1250	2749		mg/Kg		109	90 - 110	0	20

QC Association Summary

Client: Vertex
Project/Site: Corral Fly SWD

Job ID: 890-5046-1
SDG: 23E-02502

GC VOA

Analysis Batch: 59696

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5046-1	BS23-15 1FT	Total/NA	Solid	8021B	59759
890-5046-2	BS23-19 1FT	Total/NA	Solid	8021B	59759
890-5046-3	BS23-32 1FT	Total/NA	Solid	8021B	59759
890-5046-4	BS23-34 1FT	Total/NA	Solid	8021B	59759
890-5046-5	BS23-38 1FT	Total/NA	Solid	8021B	59759
MB 880-59705/5-A	Method Blank	Total/NA	Solid	8021B	59705
MB 880-59759/5-A	Method Blank	Total/NA	Solid	8021B	59759
LCS 880-59759/1-A	Lab Control Sample	Total/NA	Solid	8021B	59759
LCSD 880-59759/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	59759
890-5046-1 MS	BS23-15 1FT	Total/NA	Solid	8021B	59759
890-5046-1 MSD	BS23-15 1FT	Total/NA	Solid	8021B	59759

Prep Batch: 59705

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-59705/5-A	Method Blank	Total/NA	Solid	5035	

Prep Batch: 59759

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5046-1	BS23-15 1FT	Total/NA	Solid	5035	
890-5046-2	BS23-19 1FT	Total/NA	Solid	5035	
890-5046-3	BS23-32 1FT	Total/NA	Solid	5035	
890-5046-4	BS23-34 1FT	Total/NA	Solid	5035	
890-5046-5	BS23-38 1FT	Total/NA	Solid	5035	
MB 880-59759/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-59759/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-59759/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
890-5046-1 MS	BS23-15 1FT	Total/NA	Solid	5035	
890-5046-1 MSD	BS23-15 1FT	Total/NA	Solid	5035	

Analysis Batch: 59840

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5046-1	BS23-15 1FT	Total/NA	Solid	Total BTEX	
890-5046-2	BS23-19 1FT	Total/NA	Solid	Total BTEX	
890-5046-3	BS23-32 1FT	Total/NA	Solid	Total BTEX	
890-5046-4	BS23-34 1FT	Total/NA	Solid	Total BTEX	
890-5046-5	BS23-38 1FT	Total/NA	Solid	Total BTEX	

GC Semi VOA

Prep Batch: 59575

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5046-1	BS23-15 1FT	Total/NA	Solid	8015NM Prep	
890-5046-2	BS23-19 1FT	Total/NA	Solid	8015NM Prep	
890-5046-3	BS23-32 1FT	Total/NA	Solid	8015NM Prep	
890-5046-4	BS23-34 1FT	Total/NA	Solid	8015NM Prep	
890-5046-5	BS23-38 1FT	Total/NA	Solid	8015NM Prep	
MB 880-59575/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-59575/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-59575/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
880-31731-A-1-F MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
880-31731-A-1-G MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

QC Association Summary

Client: Vertex
Project/Site: Corral Fly SWD

Job ID: 890-5046-1
SDG: 23E-02502

GC Semi VOA

Analysis Batch: 59807

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5046-1	BS23-15 1FT	Total/NA	Solid	8015B NM	59575
890-5046-2	BS23-19 1FT	Total/NA	Solid	8015B NM	59575
890-5046-3	BS23-32 1FT	Total/NA	Solid	8015B NM	59575
890-5046-4	BS23-34 1FT	Total/NA	Solid	8015B NM	59575
890-5046-5	BS23-38 1FT	Total/NA	Solid	8015B NM	59575
MB 880-59575/1-A	Method Blank	Total/NA	Solid	8015B NM	59575
LCS 880-59575/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	59575
LCSD 880-59575/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	59575
880-31731-A-1-F MS	Matrix Spike	Total/NA	Solid	8015B NM	59575
880-31731-A-1-G MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	59575

Analysis Batch: 59879

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5046-1	BS23-15 1FT	Total/NA	Solid	8015 NM	
890-5046-2	BS23-19 1FT	Total/NA	Solid	8015 NM	
890-5046-3	BS23-32 1FT	Total/NA	Solid	8015 NM	
890-5046-4	BS23-34 1FT	Total/NA	Solid	8015 NM	
890-5046-5	BS23-38 1FT	Total/NA	Solid	8015 NM	

HPLC/IC

Leach Batch: 59730

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5046-1	BS23-15 1FT	Soluble	Solid	DI Leach	
890-5046-2	BS23-19 1FT	Soluble	Solid	DI Leach	
890-5046-3	BS23-32 1FT	Soluble	Solid	DI Leach	
890-5046-4	BS23-34 1FT	Soluble	Solid	DI Leach	
890-5046-5	BS23-38 1FT	Soluble	Solid	DI Leach	
MB 880-59730/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-59730/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-59730/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-5046-1 MS	BS23-15 1FT	Soluble	Solid	DI Leach	
890-5046-1 MSD	BS23-15 1FT	Soluble	Solid	DI Leach	

Analysis Batch: 59784

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5046-1	BS23-15 1FT	Soluble	Solid	300.0	59730
890-5046-2	BS23-19 1FT	Soluble	Solid	300.0	59730
890-5046-3	BS23-32 1FT	Soluble	Solid	300.0	59730
890-5046-4	BS23-34 1FT	Soluble	Solid	300.0	59730
890-5046-5	BS23-38 1FT	Soluble	Solid	300.0	59730
MB 880-59730/1-A	Method Blank	Soluble	Solid	300.0	59730
LCS 880-59730/2-A	Lab Control Sample	Soluble	Solid	300.0	59730
LCSD 880-59730/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	59730
890-5046-1 MS	BS23-15 1FT	Soluble	Solid	300.0	59730
890-5046-1 MSD	BS23-15 1FT	Soluble	Solid	300.0	59730

Lab Chronicle

Client: Vertex
Project/Site: Corral Fly SWD

Job ID: 890-5046-1
SDG: 23E-02502

Client Sample ID: BS23-15 1FT

Lab Sample ID: 890-5046-1

Date Collected: 08/07/23 10:00
Matrix: Solid
Date Received: 08/07/23 16:12

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	59759	08/09/23 13:14	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	59696	08/09/23 23:48	SM	EET MID
Total/NA	Analysis	Total BTEX		1			59840	08/10/23 10:23	AJ	EET MID
Total/NA	Analysis	8015 NM		1			59879	08/10/23 15:56	AJ	EET MID
Total/NA	Prep	8015NM Prep			9.92 g	10 mL	59575	08/07/23 18:03	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	59807	08/10/23 12:40	AJ	EET MID
Soluble	Leach	DI Leach			5.01 g	50 mL	59730	08/09/23 09:46	KS	EET MID
Soluble	Analysis	300.0		5			59784	08/09/23 17:18	CH	EET MID

Client Sample ID: BS23-19 1FT

Lab Sample ID: 890-5046-2

Date Collected: 08/07/23 10:05
Matrix: Solid
Date Received: 08/07/23 16:12

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	59759	08/09/23 13:14	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	59696	08/10/23 00:09	SM	EET MID
Total/NA	Analysis	Total BTEX		1			59840	08/10/23 10:23	AJ	EET MID
Total/NA	Analysis	8015 NM		1			59879	08/10/23 15:56	AJ	EET MID
Total/NA	Prep	8015NM Prep			10.07 g	10 mL	59575	08/07/23 18:03	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	59807	08/10/23 13:02	AJ	EET MID
Soluble	Leach	DI Leach			5 g	50 mL	59730	08/09/23 09:46	KS	EET MID
Soluble	Analysis	300.0		1			59784	08/09/23 17:35	CH	EET MID

Client Sample ID: BS23-32 1FT

Lab Sample ID: 890-5046-3

Date Collected: 08/07/23 10:10
Matrix: Solid
Date Received: 08/07/23 16:12

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	59759	08/09/23 13:14	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	59696	08/10/23 00:29	SM	EET MID
Total/NA	Analysis	Total BTEX		1			59840	08/10/23 10:23	AJ	EET MID
Total/NA	Analysis	8015 NM		1			59879	08/10/23 15:56	AJ	EET MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	59575	08/07/23 18:03	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	59807	08/10/23 13:24	AJ	EET MID
Soluble	Leach	DI Leach			5.04 g	50 mL	59730	08/09/23 09:46	KS	EET MID
Soluble	Analysis	300.0		5			59784	08/09/23 17:41	CH	EET MID

Client Sample ID: BS23-34 1FT

Lab Sample ID: 890-5046-4

Date Collected: 08/07/23 10:15
Matrix: Solid
Date Received: 08/07/23 16:12

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.00 g	5 mL	59759	08/09/23 13:14	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	59696	08/10/23 00:50	SM	EET MID
Total/NA	Analysis	Total BTEX		1			59840	08/10/23 10:23	AJ	EET MID

Lab Chronicle

Client: Vertex
Project/Site: Corral Fly SWD

Job ID: 890-5046-1
SDG: 23E-02502

Client Sample ID: BS23-34 1FT

Lab Sample ID: 890-5046-4

Date Collected: 08/07/23 10:15
Matrix: Solid
Date Received: 08/07/23 16:12

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			59879	08/10/23 15:56	AJ	EET MID
Total/NA	Prep	8015NM Prep			10.08 g	10 mL	59575	08/07/23 18:03	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	59807	08/10/23 13:46	AJ	EET MID
Soluble	Leach	DI Leach			4.99 g	50 mL	59730	08/09/23 09:46	KS	EET MID
Soluble	Analysis	300.0		5			59784	08/09/23 17:46	CH	EET MID

Client Sample ID: BS23-38 1FT

Lab Sample ID: 890-5046-5

Date Collected: 08/07/23 10:20
Matrix: Solid
Date Received: 08/07/23 16:12

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	59759	08/09/23 13:14	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	59696	08/10/23 01:10	SM	EET MID
Total/NA	Analysis	Total BTEX		1			59840	08/10/23 10:23	AJ	EET MID
Total/NA	Analysis	8015 NM		1			59879	08/10/23 15:56	AJ	EET MID
Total/NA	Prep	8015NM Prep			10.07 g	10 mL	59575	08/07/23 18:03	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	59807	08/10/23 14:08	AJ	EET MID
Soluble	Leach	DI Leach			5.01 g	50 mL	59730	08/09/23 09:46	KS	EET MID
Soluble	Analysis	300.0		10			59784	08/09/23 17:52	CH	EET MID

Laboratory References:

EET MID = Eurofins Midland, 1211 W. Florida Ave, Midland, TX 79701, TEL (432)704-5440

Accreditation/Certification Summary

Client: Vertex
Project/Site: Corral Fly SWD

Job ID: 890-5046-1
SDG: 23E-02502

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	T104704400-23-26	06-30-24

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: Vertex
Project/Site: Corral Fly SWD

Job ID: 890-5046-1
SDG: 23E-02502

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	EPA	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

EPA = US Environmental Protection Agency

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: Vertex
Project/Site: Corral Fly SWD

Job ID: 890-5046-1
SDG: 23E-02502

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-5046-1	BS23-15 1FT	Solid	08/07/23 10:00	08/07/23 16:12	1
890-5046-2	BS23-19 1FT	Solid	08/07/23 10:05	08/07/23 16:12	1
890-5046-3	BS23-32 1FT	Solid	08/07/23 10:10	08/07/23 16:12	1
890-5046-4	BS23-34 1FT	Solid	08/07/23 10:15	08/07/23 16:12	1
890-5046-5	BS23-38 1FT	Solid	08/07/23 10:20	08/07/23 16:12	1

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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: _____

www.xenco.com Page 1 of 1

Project Manager:	Chance Dixon	Bill to: (if different)	Rob Kirk
Company Name:	Vertex	Company Name:	Solaris Midstream
Address:	3101 Boyd Dr	Address:	
City, State ZIP:	Carlsbad, NM 88220	City, State ZIP:	
Phone:	575 988 1472	Email:	CDixon@vertex.ca/permian@vertex.ca

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:	Corral Fly SWD	Turn Around	
Project Number:	23E-02502	☐ Routine ☒ Rush 48HR	Pres. Code
Project Location:	Carlsbad, NM	Due Date: 2 Day	
Sampler's Name:	Fernando Rodriguez	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:	TJ1n007	
Cooler Custody Seals:	Yes No N/A	Correction Factor:	-0.2	
Sample Custody Seals:	Yes No N/A	Temperature Reading:	4.0	
Total Containers:		Corrected Temperature:	3.8	

ANALYSIS REQUEST

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Grab/ Comp	# of Cont	Parameters: BTEX	TPH:8015D	Cl
BS23-15 1ft	Soil	8/4	10:00	1ft	Grab	1	✓	✓	✓
BS23-19 1ft			10:05				✓	✓	✓
BS23-32 1ft			10:10				✓	✓	✓
BS23-34 1ft			10:15				✓	✓	✓
BS23-38 1ft			10:20				✓	✓	✓

890-5046 Chain of Custody

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

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	Cice	8.7.23 1612	2		
3			4		
5			6		

Revised Date 08/25/2020 Rev. 2020.2

Received by OCD: 7/24/2024 3:24:20 PM

8/10/2023

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Released to Imaging: 7/26/2024 3:59:45 PM

Login Sample Receipt Checklist

Client: Vertex

Job Number: 890-5046-1
SDG Number: 23E-02502

Login Number: 5046
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: Vertex

Job Number: 890-5046-1
SDG Number: 23E-02502

Login Number: 5046
List Number: 2
Creator: Rodriguez, Leticia

List Source: Eurofins Midland
List Creation: 08/09/23 11:11 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	

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ANALYTICAL REPORT

PREPARED FOR

Attn: Chance Dixon
Vertex
3101 Boyd Dr
Carlsbad, New Mexico 88220

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JOB DESCRIPTION

COPPAL FIG
23C02502

JOB NUMBER

890-6244-1

Eurofins Carlsbad
1089 N Canal St.
Carlsbad NM 88220

See page two for job notes and contact information.

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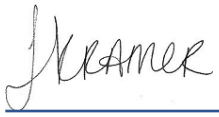
Eurofins Carlsbad

Job Notes

This report may not be reproduced except in full, and with written approval from the laboratory. The results relate only to the samples tested. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

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



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Authorized for release by
Jessica Kramer, Project Manager
Jessica.Kramer@et.eurofinsus.com
(432)704-5440

Client: Vertex
Project/Site: COPPAL FIG

Laboratory Job ID: 890-6244-1
SDG: 23C02502

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Definitions/Glossary

Client: Vertex
Project/Site: COPPAL FIG

Job ID: 890-6244-1
SDG: 23C02502

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, 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
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: Vertex
Project: COPPAL FIG

Job ID: 890-6244-1

Job ID: 890-6244-1 Eurofins Carlsbad

Job Narrative
890-6244-1

Analytical test results meet all requirements of the associated regulatory program listed on the Accreditation/Certification Summary Page unless otherwise noted under the individual analysis. Data qualifiers are applied to indicate exceptions. Noncompliant quality control (QC) is further explained in narrative comments.

- Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD may be performed, unless otherwise specified in the method.
- Surrogate and/or isotope dilution analyte recoveries (if applicable) which are outside of the QC window are confirmed unless attributed to a dilution or otherwise noted in the narrative.

Regulated compliance samples (e.g. SDWA, NPDES) must comply with the associated agency requirements/permits.

Receipt
The samples were received on 2/22/2024 8:36 AM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 1.4°C.

Receipt Exceptions
The following samples were received and analyzed from an unpreserved bulk soil jar: BH 24 - 15 (890-6244-1), BH 24 - 15 (890-6244-2), BH 24 - 16 (890-6244-3), BH 24 - 17 (890-6244-4), BH 24 - 17 (890-6244-5) and BH 24 - 16 (890-6244-6).

GC VOA
Method 8021B: The surrogate recovery for the blank associated with preparation batch 880-74061 and 880-74074 and analytical batch 880-74252 was outside the upper control limits.

Method 8021B: Surrogate recovery for the following sample was outside control limits: (890-6244-A-1-C MSD). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8021B: Spike compounds were inadvertently omitted during the extraction process for the matrix spike duplicate (MSD); therefore, matrix spike recoveries are unavailable for preparation batch 880-74074 and analytical batch 880-74252. The associated laboratory control sample (LCS) met acceptance criteria.

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 surrogate recovery for the blank associated with preparation batch 880-74099 and analytical batch 880-74227 was outside the upper control limits.

Method 8015MOD_NM: The RPD of the laboratory control sample (LCS) and laboratory control sample duplicate (LCSD) for preparation batch 880-74099 and analytical batch 880-74227 recovered outside control limits for the following analytes: Diesel Range Organics (Over C10-C28).

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

HPLC/IC
Method 300_ORGFM_28D - Soluble: The matrix spike / matrix spike duplicate (MS/MSD) recoveries and precision for preparation batch 880-73906 and 880-73906 and analytical batch 880-74077 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample / laboratory sample control duplicate (LCS/LCSD) precision was within acceptance limits.

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

Client Sample Results

Client: Vertex
Project/Site: COPPAL FIG

Job ID: 890-6244-1
SDG: 23C02502

Client Sample ID: BH 24 - 15

Date Collected: 02/21/24 11:00
Date Received: 02/22/24 08:36
Sample Depth: 0

Lab Sample ID: 890-6244-1
Matrix: Solid

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U F1	0.00199		mg/Kg		02/26/24 14:24	02/29/24 02:50	1
Ethylbenzene	<0.00199	U F1 F2	0.00199		mg/Kg		02/26/24 14:24	02/29/24 02:50	1
Toluene	<0.00199	U F1	0.00199		mg/Kg		02/26/24 14:24	02/29/24 02:50	1
Xylenes, Total	<0.00398	U F1	0.00398		mg/Kg		02/26/24 14:24	02/29/24 02:50	1
m-Xylene & p-Xylene	<0.00398	U F1 F2	0.00398		mg/Kg		02/26/24 14:24	02/29/24 02:50	1
o-Xylene	<0.00199	U F1 F2	0.00199		mg/Kg		02/26/24 14:24	02/29/24 02:50	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*87*		*70 - 130*	*02/26/24 14:24*	*02/29/24 02:50*	*1*
1,4-Difluorobenzene (Surr)	*106*		*70 - 130*	*02/26/24 14:24*	*02/29/24 02:50*	*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			02/29/24 02:50	1

Method: SW846 8015 NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.7	U	49.7		mg/Kg			02/28/24 16:42	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	<49.7	U	49.7		mg/Kg		02/26/24 17:14	02/28/24 16:42	1
Diesel Range Organics (Over C10-C28)	<49.7	U *1	49.7		mg/Kg		02/26/24 17:14	02/28/24 16:42	1
OII Range Organics (Over C28-C36)	<49.7	U	49.7		mg/Kg		02/26/24 17:14	02/28/24 16:42	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*101*		*70 - 130*	*02/26/24 17:14*	*02/28/24 16:42*	*1*
o-Terphenyl	*83*		*70 - 130*	*02/26/24 17:14*	*02/28/24 16:42*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**1750**		24.9		mg/Kg			02/26/24 22:51	5

Client Sample ID: BH 24 - 15

Date Collected: 02/21/24 11:15
Date Received: 02/22/24 08:36
Sample Depth: 2'

Lab Sample ID: 890-6244-2
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		02/26/24 14:24	02/29/24 03:10	1
Ethylbenzene	<0.00201	U	0.00201		mg/Kg		02/26/24 14:24	02/29/24 03:10	1
Toluene	<0.00201	U	0.00201		mg/Kg		02/26/24 14:24	02/29/24 03:10	1
Xylenes, Total	<0.00402	U	0.00402		mg/Kg		02/26/24 14:24	02/29/24 03:10	1
m-Xylene & p-Xylene	<0.00402	U	0.00402		mg/Kg		02/26/24 14:24	02/29/24 03:10	1
o-Xylene	<0.00201	U	0.00201		mg/Kg		02/26/24 14:24	02/29/24 03:10	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*100*		*70 - 130*	*02/26/24 14:24*	*02/29/24 03:10*	*1*

Client Sample Results

Client: Vertex
Project/Site: COPPAL FIG

Job ID: 890-6244-1
SDG: 23C02502

Client Sample ID: BH 24 - 15

Lab Sample ID: 890-6244-2
Matrix: Solid
Date Collected: 02/21/24 11:15
Date Received: 02/22/24 08:36
Sample Depth: 2'

Method: SW846 8021B - Volatile Organic Compounds (GC) (Continued)

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Difluorobenzene (Surr)	*107*		*70 - 130*	*02/26/24 14:24*	*02/29/24 03:10*	*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			02/29/24 03:10	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			02/28/24 17:03	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		02/26/24 17:14	02/28/24 17:03	1
Diesel Range Organics (Over C10-C28)	<49.9	U *1	49.9		mg/Kg		02/26/24 17:14	02/28/24 17:03	1
OII Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		02/26/24 17:14	02/28/24 17:03	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*119*		*70 - 130*	*02/26/24 17:14*	*02/28/24 17:03*	*1*
o-Terphenyl	*99*		*70 - 130*	*02/26/24 17:14*	*02/28/24 17:03*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**623**	**F1**	4.99		mg/Kg			02/26/24 22:55	1

Client Sample ID: BH 24 - 16

Lab Sample ID: 890-6244-3
Matrix: Solid
Date Collected: 02/21/24 11:30
Date Received: 02/22/24 08:36
Sample Depth: 2'

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		02/26/24 14:24	02/29/24 03:30	1
Ethylbenzene	<0.00202	U	0.00202		mg/Kg		02/26/24 14:24	02/29/24 03:30	1
Toluene	<0.00202	U	0.00202		mg/Kg		02/26/24 14:24	02/29/24 03:30	1
Xylenes, Total	<0.00403	U	0.00403		mg/Kg		02/26/24 14:24	02/29/24 03:30	1
m-Xylene & p-Xylene	<0.00403	U	0.00403		mg/Kg		02/26/24 14:24	02/29/24 03:30	1
o-Xylene	<0.00202	U	0.00202		mg/Kg		02/26/24 14:24	02/29/24 03:30	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*103*		*70 - 130*	*02/26/24 14:24*	*02/29/24 03:30*	*1*
1,4-Difluorobenzene (Surr)	*104*		*70 - 130*	*02/26/24 14:24*	*02/29/24 03:30*	*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			02/29/24 03:30	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			02/28/24 17:25	1

Client Sample Results

Client: Vertex
Project/Site: COPPAL FIG

Job ID: 890-6244-1
SDG: 23C02502

Client Sample ID: BH 24 - 16

Lab Sample ID: 890-6244-3
Matrix: Solid
Date Collected: 02/21/24 11:30
Date Received: 02/22/24 08:36
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	50.0		mg/Kg		02/26/24 17:14	02/28/24 17:25	1
Diesel Range Organics (Over C10-C28)	<50.0	U *1	50.0		mg/Kg		02/26/24 17:14	02/28/24 17:25	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		02/26/24 17:14	02/28/24 17:25	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*109*		*70 - 130*	*02/26/24 17:14*	*02/28/24 17:25*	*1*
o-Terphenyl	*92*		*70 - 130*	*02/26/24 17:14*	*02/28/24 17:25*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**151**		4.95		mg/Kg			02/26/24 23:09	1

Client Sample ID: BH 24 - 17

Lab Sample ID: 890-6244-4
Matrix: Solid
Date Collected: 02/21/24 11:45
Date Received: 02/22/24 08:36
Sample Depth: 0

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		02/26/24 14:24	02/29/24 03:51	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		02/26/24 14:24	02/29/24 03:51	1
Toluene	<0.00199	U	0.00199		mg/Kg		02/26/24 14:24	02/29/24 03:51	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		02/26/24 14:24	02/29/24 03:51	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		02/26/24 14:24	02/29/24 03:51	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		02/26/24 14:24	02/29/24 03:51	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*106*		*70 - 130*	*02/26/24 14:24*	*02/29/24 03:51*	*1*
1,4-Difluorobenzene (Surr)	*113*		*70 - 130*	*02/26/24 14:24*	*02/29/24 03:51*	*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			02/29/24 03:51	1

Method: SW846 8015 NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.1	U	50.1		mg/Kg			02/28/24 17:46	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	<50.1	U	50.1		mg/Kg		02/26/24 17:14	02/28/24 17:46	1
Diesel Range Organics (Over C10-C28)	<50.1	U *1	50.1		mg/Kg		02/26/24 17:14	02/28/24 17:46	1
OII Range Organics (Over C28-C36)	<50.1	U	50.1		mg/Kg		02/26/24 17:14	02/28/24 17:46	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*98*		*70 - 130*	*02/26/24 17:14*	*02/28/24 17:46*	*1*
o-Terphenyl	*79*		*70 - 130*	*02/26/24 17:14*	*02/28/24 17:46*	*1*

Client Sample Results

Client: Vertex
Project/Site: COPPAL FIG

Job ID: 890-6244-1
SDG: 23C02502

Client Sample ID: BH 24 - 17

Lab Sample ID: 890-6244-4
Matrix: Solid
Date Collected: 02/21/24 11:45
Date Received: 02/22/24 08:36
Sample Depth: 0

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	67.9		5.03		mg/Kg			02/26/24 23:14	1

Client Sample ID: BH 24 - 17

Lab Sample ID: 890-6244-5
Matrix: Solid
Date Collected: 02/21/24 12:00
Date Received: 02/22/24 08:36
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		02/26/24 14:24	02/29/24 04:11	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		02/26/24 14:24	02/29/24 04:11	1
Toluene	<0.00200	U	0.00200		mg/Kg		02/26/24 14:24	02/29/24 04:11	1
Xylenes, Total	<0.00399	U	0.00399		mg/Kg		02/26/24 14:24	02/29/24 04:11	1
m-Xylene & p-Xylene	<0.00399	U	0.00399		mg/Kg		02/26/24 14:24	02/29/24 04:11	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		02/26/24 14:24	02/29/24 04:11	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*104*		*70 - 130*	*02/26/24 14:24*	*02/29/24 04:11*	*1*
1,4-Difluorobenzene (Surr)	*105*		*70 - 130*	*02/26/24 14:24*	*02/29/24 04:11*	*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			02/29/24 04:11	1

Method: SW846 8015 NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.4	U	50.4		mg/Kg			02/28/24 18:08	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	<50.4	U	50.4		mg/Kg		02/26/24 17:14	02/28/24 18:08	1
Diesel Range Organics (Over C10-C28)	<50.4	U *1	50.4		mg/Kg		02/26/24 17:14	02/28/24 18:08	1
OII Range Organics (Over C28-C36)	<50.4	U	50.4		mg/Kg		02/26/24 17:14	02/28/24 18:08	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*103*		*70 - 130*	*02/26/24 17:14*	*02/28/24 18:08*	*1*
o-Terphenyl	*80*		*70 - 130*	*02/26/24 17:14*	*02/28/24 18:08*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	200		5.03		mg/Kg			02/26/24 23:28	1

Client Sample Results

Client: Vertex
Project/Site: COPPAL FIG

Job ID: 890-6244-1
SDG: 23C02502

Client Sample ID: BH 24 - 16

Date Collected: 02/21/24 12:15
Date Received: 02/22/24 08:36
Sample Depth: 2'

Lab Sample ID: 890-6244-6

Matrix: Solid

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00198	U	0.00198		mg/Kg		02/26/24 14:24	02/29/24 04:32	1
Ethylbenzene	<0.00198	U	0.00198		mg/Kg		02/26/24 14:24	02/29/24 04:32	1
Toluene	<0.00198	U	0.00198		mg/Kg		02/26/24 14:24	02/29/24 04:32	1
Xylenes, Total	<0.00396	U	0.00396		mg/Kg		02/26/24 14:24	02/29/24 04:32	1
m-Xylene & p-Xylene	<0.00396	U	0.00396		mg/Kg		02/26/24 14:24	02/29/24 04:32	1
o-Xylene	<0.00198	U	0.00198		mg/Kg		02/26/24 14:24	02/29/24 04:32	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*101*		*70 - 130*	*02/26/24 14:24*	*02/29/24 04:32*	*1*
1,4-Difluorobenzene (Surr)	*99*		*70 - 130*	*02/26/24 14:24*	*02/29/24 04:32*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00396	U	0.00396		mg/Kg			02/29/24 04:32	1

Method: SW846 8015 NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.5	U	50.5		mg/Kg			02/28/24 18:30	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	<50.5	U	50.5		mg/Kg		02/26/24 17:14	02/28/24 18:30	1
Diesel Range Organics (Over C10-C28)	<50.5	U *1	50.5		mg/Kg		02/26/24 17:14	02/28/24 18:30	1
OII Range Organics (Over C28-C36)	<50.5	U	50.5		mg/Kg		02/26/24 17:14	02/28/24 18:30	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*114*		*70 - 130*	*02/26/24 17:14*	*02/28/24 18:30*	*1*
o-Terphenyl	*92*		*70 - 130*	*02/26/24 17:14*	*02/28/24 18:30*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**84.3**		5.02		mg/Kg			02/26/24 23:32	1

Surrogate Summary

Client: Vertex
Project/Site: COPPAL FIG

Job ID: 890-6244-1
SDG: 23C02502

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)										
890-6244-1	BH 24 - 15	87	106										
890-6244-1 MS	BH 24 - 15	104	90										
890-6244-1 MSD	BH 24 - 15	140 S1+	133 S1+										
890-6244-2	BH 24 - 15	100	107										
890-6244-3	BH 24 - 16	103	104										
890-6244-4	BH 24 - 17	106	113										
890-6244-5	BH 24 - 17	104	105										
890-6244-6	BH 24 - 16	101	99										
LCS 880-74074/1-A	Lab Control Sample	99	98										
LCSD 880-74074/2-A	Lab Control Sample Dup	95	91										
MB 880-74061/5-A	Method Blank	144 S1+	138 S1+										
MB 880-74074/5-A	Method Blank	140 S1+	143 S1+										

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)										
880-39711-A-21-H MS	Matrix Spike	96	75										
880-39711-A-21-I MSD	Matrix Spike Duplicate	95	72										
890-6244-1	BH 24 - 15	101	83										
890-6244-2	BH 24 - 15	119	99										
890-6244-3	BH 24 - 16	109	92										
890-6244-4	BH 24 - 17	98	79										
890-6244-5	BH 24 - 17	103	80										
890-6244-6	BH 24 - 16	114	92										
LCS 880-74099/2-A	Lab Control Sample	117	118										
LCSD 880-74099/3-A	Lab Control Sample Dup	95	90										
MB 880-74099/1-A	Method Blank	194 S1+	173 S1+										

Surrogate Legend

1CO = 1-Chlorooctane

OTPH = o-Terphenyl

QC Sample Results

Client: Vertex
Project/Site: COPPAL FIG

Job ID: 890-6244-1
SDG: 23C02502

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-74061/5-A
Matrix: Solid
Analysis Batch: 74252

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 74061

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		02/26/24 14:11	02/28/24 14:43	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		02/26/24 14:11	02/28/24 14:43	1
Toluene	<0.00200	U	0.00200		mg/Kg		02/26/24 14:11	02/28/24 14:43	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		02/26/24 14:11	02/28/24 14:43	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		02/26/24 14:11	02/28/24 14:43	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		02/26/24 14:11	02/28/24 14:43	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*144*	*S1+*	*70 - 130*	*02/26/24 14:11*	*02/28/24 14:43*	*1*
1,4-Difluorobenzene (Surr)	*138*	*S1+*	*70 - 130*	*02/26/24 14:11*	*02/28/24 14:43*	*1*

Lab Sample ID: MB 880-74074/5-A
Matrix: Solid
Analysis Batch: 74252

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 74074

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		02/26/24 14:24	02/29/24 02:21	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		02/26/24 14:24	02/29/24 02:21	1
Toluene	<0.00200	U	0.00200		mg/Kg		02/26/24 14:24	02/29/24 02:21	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		02/26/24 14:24	02/29/24 02:21	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		02/26/24 14:24	02/29/24 02:21	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		02/26/24 14:24	02/29/24 02:21	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*140*	*S1+*	*70 - 130*	*02/26/24 14:24*	*02/29/24 02:21*	*1*
1,4-Difluorobenzene (Surr)	*143*	*S1+*	*70 - 130*	*02/26/24 14:24*	*02/29/24 02:21*	*1*

Lab Sample ID: LCS 880-74074/1-A
Matrix: Solid
Analysis Batch: 74252

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 74074

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	0.100	0.09934		mg/Kg		99	70 - 130
Ethylbenzene	0.100	0.1104		mg/Kg		110	70 - 130
Toluene	0.100	0.09681		mg/Kg		97	70 - 130
m-Xylene & p-Xylene	0.200	0.1948		mg/Kg		97	70 - 130
o-Xylene	0.100	0.09535		mg/Kg		95	70 - 130

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*99*		*70 - 130*
1,4-Difluorobenzene (Surr)	*98*		*70 - 130*

Lab Sample ID: LCSD 880-74074/2-A
Matrix: Solid
Analysis Batch: 74252

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 74074

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	0.100	0.09453		mg/Kg		95	70 - 130	5	35

QC Sample Results

Client: Vertex
Project/Site: COPPAL FIG

Job ID: 890-6244-1
SDG: 23C02502

Method: 8021B - Volatile Organic Compounds (GC) (Continued)

Lab Sample ID: LCSD 880-74074/2-A
Matrix: Solid
Analysis Batch: 74252

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 74074

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Ethylbenzene			0.100	0.09475		mg/Kg		95	70 - 130	15	35
Toluene			0.100	0.09113		mg/Kg		91	70 - 130	6	35
m-Xylene & p-Xylene			0.200	0.1717		mg/Kg		86	70 - 130	13	35
o-Xylene			0.100	0.07965		mg/Kg		80	70 - 130	18	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*95*		*70 - 130*
1,4-Difluorobenzene (Surr)	*91*		*70 - 130*

Lab Sample ID: 890-6244-1 MS
Matrix: Solid
Analysis Batch: 74252

Client Sample ID: BH 24 - 15
Prep Type: Total/NA
Prep Batch: 74074

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	<0.00199	U F1	0.101	0.09856		mg/Kg		98	70 - 130
Ethylbenzene	<0.00199	U F1 F2	0.101	0.09831		mg/Kg		98	70 - 130
Toluene	<0.00199	U F1	0.101	0.09690		mg/Kg		96	70 - 130
m-Xylene & p-Xylene	<0.00398	U F1 F2	0.202	0.1797		mg/Kg		89	70 - 130
o-Xylene	<0.00199	U F1 F2	0.101	0.09583		mg/Kg		95	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*104*		*70 - 130*
1,4-Difluorobenzene (Surr)	*90*		*70 - 130*

Lab Sample ID: 890-6244-1 MSD
Matrix: Solid
Analysis Batch: 74252

Client Sample ID: BH 24 - 15
Prep Type: Total/NA
Prep Batch: 74074

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	<0.00199	U F1	0.100	<0.00200	U F1	mg/Kg		0	70 - 130	NC	35
Ethylbenzene	<0.00199	U F1 F2	0.100	<0.00200	U F1 F2	mg/Kg		0.8	70 - 130	197	35
Toluene	<0.00199	U F1	0.100	<0.00200	U F1	mg/Kg		0	70 - 130	NC	35
m-Xylene & p-Xylene	<0.00398	U F1 F2	0.200	<0.00400	U F1 F2	mg/Kg		1	70 - 130	194	35
o-Xylene	<0.00199	U F1 F2	0.100	<0.00200	U F1 F2	mg/Kg		1	70 - 130	193	35

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*140*	*S1+*	*70 - 130*
1,4-Difluorobenzene (Surr)	*133*	*S1+*	*70 - 130*

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

Lab Sample ID: MB 880-74099/1-A
Matrix: Solid
Analysis Batch: 74227

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 74099

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		02/26/24 17:13	02/28/24 08:25	1

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QC Sample Results

Client: Vertex
Project/Site: COPPAL FIG

Job ID: 890-6244-1
SDG: 23C02502

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

Lab Sample ID: MB 880-74099/1-A
Matrix: Solid
Analysis Batch: 74227

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 74099

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		02/26/24 17:13	02/28/24 08:25	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		02/26/24 17:13	02/28/24 08:25	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*194*	*S1+*	*70 - 130*	*02/26/24 17:13*	*02/28/24 08:25*	*1*
o-Terphenyl	*173*	*S1+*	*70 - 130*	*02/26/24 17:13*	*02/28/24 08:25*	*1*

Lab Sample ID: LCS 880-74099/2-A
Matrix: Solid
Analysis Batch: 74227

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 74099

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics (GRO)-C6-C10	1000	825.1		mg/Kg		83	70 - 130
Diesel Range Organics (Over C10-C28)	1000	991.3		mg/Kg		99	70 - 130

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1-Chlorooctane	*117*		*70 - 130*
o-Terphenyl	*118*		*70 - 130*

Lab Sample ID: LCSD 880-74099/3-A
Matrix: Solid
Analysis Batch: 74227

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 74099

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	1000	1012		mg/Kg		101	70 - 130	20	20
Diesel Range Organics (Over C10-C28)	1000	784.6	*1	mg/Kg		78	70 - 130	23	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1-Chlorooctane	*95*		*70 - 130*
o-Terphenyl	*90*		*70 - 130*

Lab Sample ID: 880-39711-A-21-H MS
Matrix: Solid
Analysis Batch: 74227

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 74099

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics (GRO)-C6-C10	<50.1	U	1010	844.3		mg/Kg		81	70 - 130
Diesel Range Organics (Over C10-C28)	<50.1	U *1	1010	969.2		mg/Kg		94	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
1-Chlorooctane	*96*		*70 - 130*
o-Terphenyl	*75*		*70 - 130*

QC Sample Results

Client: Vertex
Project/Site: COPPAL FIG

Job ID: 890-6244-1
SDG: 23C02502

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

Lab Sample ID: 880-39711-A-21-I MSD
Matrix: Solid
Analysis Batch: 74227

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 74099

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	<50.1	U	1010	890.2		mg/Kg		86	70 - 130	5	20
Diesel Range Organics (Over C10-C28)	<50.1	U *1	1010	937.9		mg/Kg		91	70 - 130	3	20

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
1-Chlorooctane	*95*		*70 - 130*
o-Terphenyl	*72*		*70 - 130*

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-73906/1-A
Matrix: Solid
Analysis Batch: 74077

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			02/26/24 21:37	1

Lab Sample ID: LCS 880-73906/2-A
Matrix: Solid
Analysis Batch: 74077

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	250	253.5		mg/Kg		101	90 - 110

Lab Sample ID: LCSD 880-73906/3-A
Matrix: Solid
Analysis Batch: 74077

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	254.8		mg/Kg		102	90 - 110	1	20

Lab Sample ID: 890-6244-2 MS
Matrix: Solid
Analysis Batch: 74077

Client Sample ID: BH 24 - 15
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	623	F1	250	827.4	F1	mg/Kg		82	90 - 110

Lab Sample ID: 890-6244-2 MSD
Matrix: Solid
Analysis Batch: 74077

Client Sample ID: BH 24 - 15
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	623	F1	250	829.3	F1	mg/Kg		83	90 - 110	0	20

QC Association Summary

Client: Vertex
Project/Site: COPPAL FIG

Job ID: 890-6244-1
SDG: 23C02502

GC VOA

Prep Batch: 74061

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-74061/5-A	Method Blank	Total/NA	Solid	5035	

Prep Batch: 74074

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-6244-1	BH 24 - 15	Total/NA	Solid	5035	
890-6244-2	BH 24 - 15	Total/NA	Solid	5035	
890-6244-3	BH 24 - 16	Total/NA	Solid	5035	
890-6244-4	BH 24 - 17	Total/NA	Solid	5035	
890-6244-5	BH 24 - 17	Total/NA	Solid	5035	
890-6244-6	BH 24 - 16	Total/NA	Solid	5035	
MB 880-74074/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-74074/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-74074/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
890-6244-1 MS	BH 24 - 15	Total/NA	Solid	5035	
890-6244-1 MSD	BH 24 - 15	Total/NA	Solid	5035	

Analysis Batch: 74252

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-6244-1	BH 24 - 15	Total/NA	Solid	8021B	74074
890-6244-2	BH 24 - 15	Total/NA	Solid	8021B	74074
890-6244-3	BH 24 - 16	Total/NA	Solid	8021B	74074
890-6244-4	BH 24 - 17	Total/NA	Solid	8021B	74074
890-6244-5	BH 24 - 17	Total/NA	Solid	8021B	74074
890-6244-6	BH 24 - 16	Total/NA	Solid	8021B	74074
MB 880-74061/5-A	Method Blank	Total/NA	Solid	8021B	74061
MB 880-74074/5-A	Method Blank	Total/NA	Solid	8021B	74074
LCS 880-74074/1-A	Lab Control Sample	Total/NA	Solid	8021B	74074
LCSD 880-74074/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	74074
890-6244-1 MS	BH 24 - 15	Total/NA	Solid	8021B	74074
890-6244-1 MSD	BH 24 - 15	Total/NA	Solid	8021B	74074

Analysis Batch: 74372

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-6244-1	BH 24 - 15	Total/NA	Solid	Total BTEX	
890-6244-2	BH 24 - 15	Total/NA	Solid	Total BTEX	
890-6244-3	BH 24 - 16	Total/NA	Solid	Total BTEX	
890-6244-4	BH 24 - 17	Total/NA	Solid	Total BTEX	
890-6244-5	BH 24 - 17	Total/NA	Solid	Total BTEX	
890-6244-6	BH 24 - 16	Total/NA	Solid	Total BTEX	

GC Semi VOA

Prep Batch: 74099

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-6244-1	BH 24 - 15	Total/NA	Solid	8015NM Prep	
890-6244-2	BH 24 - 15	Total/NA	Solid	8015NM Prep	
890-6244-3	BH 24 - 16	Total/NA	Solid	8015NM Prep	
890-6244-4	BH 24 - 17	Total/NA	Solid	8015NM Prep	
890-6244-5	BH 24 - 17	Total/NA	Solid	8015NM Prep	
890-6244-6	BH 24 - 16	Total/NA	Solid	8015NM Prep	
MB 880-74099/1-A	Method Blank	Total/NA	Solid	8015NM Prep	

QC Association Summary

Client: Vertex
Project/Site: COPPAL FIG

Job ID: 890-6244-1
SDG: 23C02502

GC Semi VOA (Continued)

Prep Batch: 74099 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 880-74099/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-74099/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
880-39711-A-21-H MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
880-39711-A-21-I MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

Analysis Batch: 74227

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-6244-1	BH 24 - 15	Total/NA	Solid	8015B NM	74099
890-6244-2	BH 24 - 15	Total/NA	Solid	8015B NM	74099
890-6244-3	BH 24 - 16	Total/NA	Solid	8015B NM	74099
890-6244-4	BH 24 - 17	Total/NA	Solid	8015B NM	74099
890-6244-5	BH 24 - 17	Total/NA	Solid	8015B NM	74099
890-6244-6	BH 24 - 16	Total/NA	Solid	8015B NM	74099
MB 880-74099/1-A	Method Blank	Total/NA	Solid	8015B NM	74099
LCS 880-74099/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	74099
LCSD 880-74099/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	74099
880-39711-A-21-H MS	Matrix Spike	Total/NA	Solid	8015B NM	74099
880-39711-A-21-I MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	74099

Analysis Batch: 74354

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-6244-1	BH 24 - 15	Total/NA	Solid	8015 NM	
890-6244-2	BH 24 - 15	Total/NA	Solid	8015 NM	
890-6244-3	BH 24 - 16	Total/NA	Solid	8015 NM	
890-6244-4	BH 24 - 17	Total/NA	Solid	8015 NM	
890-6244-5	BH 24 - 17	Total/NA	Solid	8015 NM	
890-6244-6	BH 24 - 16	Total/NA	Solid	8015 NM	

HPLC/IC

Leach Batch: 73906

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-6244-1	BH 24 - 15	Soluble	Solid	DI Leach	
890-6244-2	BH 24 - 15	Soluble	Solid	DI Leach	
890-6244-3	BH 24 - 16	Soluble	Solid	DI Leach	
890-6244-4	BH 24 - 17	Soluble	Solid	DI Leach	
890-6244-5	BH 24 - 17	Soluble	Solid	DI Leach	
890-6244-6	BH 24 - 16	Soluble	Solid	DI Leach	
MB 880-73906/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-73906/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-73906/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-6244-2 MS	BH 24 - 15	Soluble	Solid	DI Leach	
890-6244-2 MSD	BH 24 - 15	Soluble	Solid	DI Leach	

Analysis Batch: 74077

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-6244-1	BH 24 - 15	Soluble	Solid	300.0	73906
890-6244-2	BH 24 - 15	Soluble	Solid	300.0	73906
890-6244-3	BH 24 - 16	Soluble	Solid	300.0	73906
890-6244-4	BH 24 - 17	Soluble	Solid	300.0	73906
890-6244-5	BH 24 - 17	Soluble	Solid	300.0	73906

QC Association Summary

Client: Vertex
Project/Site: COPPAL FIG

Job ID: 890-6244-1
SDG: 23C02502

HPLC/IC (Continued)

Analysis Batch: 74077 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-6244-6	BH 24 - 16	Soluble	Solid	300.0	73906
MB 880-73906/1-A	Method Blank	Soluble	Solid	300.0	73906
LCS 880-73906/2-A	Lab Control Sample	Soluble	Solid	300.0	73906
LCSD 880-73906/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	73906
890-6244-2 MS	BH 24 - 15	Soluble	Solid	300.0	73906
890-6244-2 MSD	BH 24 - 15	Soluble	Solid	300.0	73906

Lab Chronicle

Client: Vertex
Project/Site: COPPAL FIG

Job ID: 890-6244-1
SDG: 23C02502

Client Sample ID: BH 24 - 15

Lab Sample ID: 890-6244-1
Matrix: Solid
Date Collected: 02/21/24 11:00
Date Received: 02/22/24 08:36

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	74074	02/26/24 14:24	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	74252	02/29/24 02:50	SM	EET MID
Total/NA	Analysis	Total BTEX		1			74372	02/29/24 02:50	SM	EET MID
Total/NA	Analysis	8015 NM		1			74354	02/28/24 16:42	SM	EET MID
Total/NA	Prep	8015NM Prep			10.06 g	10 mL	74099	02/26/24 17:14	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	74227	02/28/24 16:42	SM	EET MID
Soluble	Leach	DI Leach			5.03 g	50 mL	73906	02/23/24 07:57	SA	EET MID
Soluble	Analysis	300.0		5			74077	02/26/24 22:51	CH	EET MID

Client Sample ID: BH 24 - 15

Lab Sample ID: 890-6244-2
Matrix: Solid
Date Collected: 02/21/24 11:15
Date Received: 02/22/24 08:36

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	74074	02/26/24 14:24	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	74252	02/29/24 03:10	SM	EET MID
Total/NA	Analysis	Total BTEX		1			74372	02/29/24 03:10	SM	EET MID
Total/NA	Analysis	8015 NM		1			74354	02/28/24 17:03	SM	EET MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	74099	02/26/24 17:14	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	74227	02/28/24 17:03	SM	EET MID
Soluble	Leach	DI Leach			5.01 g	50 mL	73906	02/23/24 07:57	SA	EET MID
Soluble	Analysis	300.0		1			74077	02/26/24 22:55	CH	EET MID

Client Sample ID: BH 24 - 16

Lab Sample ID: 890-6244-3
Matrix: Solid
Date Collected: 02/21/24 11:30
Date Received: 02/22/24 08:36

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	74074	02/26/24 14:24	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	74252	02/29/24 03:30	SM	EET MID
Total/NA	Analysis	Total BTEX		1			74372	02/29/24 03:30	SM	EET MID
Total/NA	Analysis	8015 NM		1			74354	02/28/24 17:25	SM	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	74099	02/26/24 17:14	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	74227	02/28/24 17:25	SM	EET MID
Soluble	Leach	DI Leach			5.05 g	50 mL	73906	02/23/24 07:57	SA	EET MID
Soluble	Analysis	300.0		1			74077	02/26/24 23:09	CH	EET MID

Client Sample ID: BH 24 - 17

Lab Sample ID: 890-6244-4
Matrix: Solid
Date Collected: 02/21/24 11:45
Date Received: 02/22/24 08:36

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	74074	02/26/24 14:24	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	74252	02/29/24 03:51	SM	EET MID
Total/NA	Analysis	Total BTEX		1			74372	02/29/24 03:51	SM	EET MID

Eurofins Carlsbad

Lab Chronicle

Client: Vertex
Project/Site: COPPAL FIG

Job ID: 890-6244-1
SDG: 23C02502

Client Sample ID: BH 24 - 17

Date Collected: 02/21/24 11:45
Date Received: 02/22/24 08:36

Lab Sample ID: 890-6244-4

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8015 NM		1			74354	02/28/24 17:46	SM	EET MID
Total/NA	Prep	8015NM Prep			9.98 g	10 mL	74099	02/26/24 17:14	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	74227	02/28/24 17:46	SM	EET MID
Soluble	Leach	DI Leach			4.97 g	50 mL	73906	02/23/24 07:57	SA	EET MID
Soluble	Analysis	300.0		1			74077	02/26/24 23:14	CH	EET MID

Client Sample ID: BH 24 - 17

Date Collected: 02/21/24 12:00
Date Received: 02/22/24 08:36

Lab Sample ID: 890-6244-5

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	5035			5.01 g	5 mL	74074	02/26/24 14:24	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	74252	02/29/24 04:11	SM	EET MID
Total/NA	Analysis	Total BTEX		1			74372	02/29/24 04:11	SM	EET MID
Total/NA	Analysis	8015 NM		1			74354	02/28/24 18:08	SM	EET MID
Total/NA	Prep	8015NM Prep			9.92 g	10 mL	74099	02/26/24 17:14	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	74227	02/28/24 18:08	SM	EET MID
Soluble	Leach	DI Leach			4.97 g	50 mL	73906	02/23/24 07:57	SA	EET MID
Soluble	Analysis	300.0		1			74077	02/26/24 23:28	CH	EET MID

Client Sample ID: BH 24 - 16

Date Collected: 02/21/24 12:15
Date Received: 02/22/24 08:36

Lab Sample ID: 890-6244-6

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	5035			5.05 g	5 mL	74074	02/26/24 14:24	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	74252	02/29/24 04:32	SM	EET MID
Total/NA	Analysis	Total BTEX		1			74372	02/29/24 04:32	SM	EET MID
Total/NA	Analysis	8015 NM		1			74354	02/28/24 18:30	SM	EET MID
Total/NA	Prep	8015NM Prep			9.90 g	10 mL	74099	02/26/24 17:14	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	74227	02/28/24 18:30	SM	EET MID
Soluble	Leach	DI Leach			4.98 g	50 mL	73906	02/23/24 07:57	SA	EET MID
Soluble	Analysis	300.0		1			74077	02/26/24 23:32	CH	EET MID

Laboratory References:

EET MID = Eurofins Midland, 1211 W. Florida Ave, Midland, TX 79701, TEL (432)704-5440

Accreditation/Certification Summary

Client: Vertex
Project/Site: COPPAL FIG

Job ID: 890-6244-1
SDG: 23C02502

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	T104704400-23-26	06-30-24

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: Vertex
Project/Site: COPPAL FIG

Job ID: 890-6244-1
SDG: 23C02502

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	EPA	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

EPA = US Environmental Protection Agency

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: Vertex
Project/Site: COPPAL FIG

Job ID: 890-6244-1
SDG: 23C02502

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-6244-1	BH 24 - 15	Solid	02/21/24 11:00	02/22/24 08:36	0
890-6244-2	BH 24 - 15	Solid	02/21/24 11:15	02/22/24 08:36	2'
890-6244-3	BH 24 - 16	Solid	02/21/24 11:30	02/22/24 08:36	2'
890-6244-4	BH 24 - 17	Solid	02/21/24 11:45	02/22/24 08:36	0
890-6244-5	BH 24 - 17	Solid	02/21/24 12:00	02/22/24 08:36	2'
890-6244-6	BH 24 - 16	Solid	02/21/24 12:15	02/22/24 08:36	2'

Released to Imaging: 7/26/2024 3:59:45 PM
Received by OCD: 7/24/2024 3:24:20 PM

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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: _____

www.xenco.com Page _____ of _____

Project Manager:	Chance D. Xen	Bill to: (if different)	Rob Kirk
Company Name:	Vertex	Company Name:	Solaris
Address:	On file	Address:	On file
City, State ZIP:	↓	City, State ZIP:	↓
Phone:	↓	Email:	CDixon@Vertex.ca

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:	Corral Fly	Turn Around	
Project Number:	23E-02502	☐ Routine ☐ Rush	
Project Location:	Corral Fly	Due Date:	
Sampler's Name:	Garrett Wallace	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:	Thermo2
Cooler Custody Seals:	Yes No (N/A)	Correction Factor:	-0.2
Sample Custody Seals:	Yes No (N/A)	Temperature Reading:	1.6
Total Containers:		Corrected Temperature:	1.4

ANALYSIS REQUEST

890-6244 Chain of Custody

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

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Grab/Comp	# of Cont	Parameters: BTEX 8021	TPH 8015	Cl	Sample Comments
BH24-15	Soil	02/21/24	11:00	0	✓	1				
BH24-15	"	"	11:15	2FT	"	"				
BH24-16	"	"	11:30	2FT	"	"				
BH24-17	"	"	11:45	0	"	"				
BH24-17	"	"	12:00	2	"	"				
BH24-16	"	"	12:15	2	"	"				

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		8:36 2/22	4		
3			6		
5					

Revised Date: 08/25/2020 Rev. 2020.2

Login Sample Receipt Checklist

Client: Vertex

Job Number: 890-6244-1
SDG Number: 23C02502

Login Number: 6244
List Number: 1
Creator: Bruns, Shannon

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: Vertex

Job Number: 890-6244-1
SDG Number: 23C02502

Login Number: 6244
List Number: 2
Creator: Rodriguez, Leticia

List Source: Eurofins Midland
List Creation: 02/23/24 10:47 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	

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ANALYTICAL REPORT

PREPARED FOR

Attn: Chance Dixon
Vertex
3101 Boyd Dr
Carlsbad, New Mexico 88220

Generated 3/14/2024 12:33:50 PM

JOB DESCRIPTION

CORRAL FLY SWD
23 E - 02502

JOB NUMBER

890-6333-1

Eurofins Carlsbad
1089 N Canal St.
Carlsbad NM 88220

See page two for job notes and contact information.

Released to Imaging: 7/26/2024 3:39:45 PM

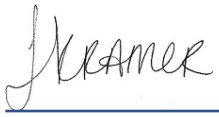
Eurofins Carlsbad

Job Notes

This report may not be reproduced except in full, and with written approval from the laboratory. The results relate only to the samples tested. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

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



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3/14/2024 12:33:50 PM

Authorized for release by
Jessica Kramer, Project Manager
Jessica.Kramer@et.eurofinsus.com
(432)704-5440

Client: Vertex
Project/Site: CORRAL FLY SWD

Laboratory Job ID: 890-6333-1
SDG: 23 E - 02502

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Receipt Checklists 22

Definitions/Glossary

Client: Vertex
Project/Site: CORRAL FLY SWD

Job ID: 890-6333-1
SDG: 23 E - 02502

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
*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
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: Vertex Job ID: 890-6333-1
Project: CORRAL FLY SWD

Job ID: 890-6333-1 Eurofins Carlsbad

Job Narrative
890-6333-1

Analytical test results meet all requirements of the associated regulatory program listed on the Accreditation/Certification Summary Page unless otherwise noted under the individual analysis. Data qualifiers are applied to indicate exceptions. Noncompliant quality control (QC) is further explained in narrative comments.

- Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD may be performed, unless otherwise specified in the method.
- Surrogate and/or isotope dilution analyte recoveries (if applicable) which are outside of the QC window are confirmed unless attributed to a dilution or otherwise noted in the narrative.

Regulated compliance samples (e.g. SDWA, NPDES) must comply with the associated agency requirements/permits.

Receipt
The samples were received on 3/11/2024 11:35 AM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 2.8°C.

Receipt Exceptions
The following samples were received and analyzed from an unpreserved bulk soil jar: BH 24 - 18 0' (890-6333-1) and BH 24 - 18 2' (890-6333-2).

GC VOA
Method 8021B: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 880-75372 and analytical batch 880-75421 were outside control limits for one or more analytes. See QC Sample Results for detail. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery is 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 surrogate recovery for the blank associated with preparation batch 880-75426 and analytical batch 880-75449 was outside the upper control limits.

Method 8015MOD_NM: The RPD of the laboratory control sample (LCS) and laboratory control sample duplicate (LCSD) for preparation batch 880-75426 and analytical batch 880-75449 recovered outside control limits for the following analytes: Diesel Range Organics (Over C10-C28).

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

HPLC/IC
Method 300_ORGFM_28D - Soluble: The matrix spike / matrix spike duplicate (MS/MSD) recoveries and precision for preparation batch 880-75402 and analytical batch 880-75466 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample / laboratory sample control duplicate (LCS/LCSD) precision was within acceptance limits.

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

Client Sample Results

Client: Vertex
Project/Site: CORRAL FLY SWD

Job ID: 890-6333-1
SDG: 23 E - 02502

Client Sample ID: BH 24 - 18 0'

Lab Sample ID: 890-6333-1
Matrix: Solid
Date Collected: 03/06/24 13:35
Date Received: 03/11/24 11:35
Sample Depth: 0'

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00198	U	0.00198		mg/Kg		03/12/24 12:34	03/13/24 00:44	1
Ethylbenzene	<0.00198	U	0.00198		mg/Kg		03/12/24 12:34	03/13/24 00:44	1
Toluene	<0.00198	U	0.00198		mg/Kg		03/12/24 12:34	03/13/24 00:44	1
Xylenes, Total	<0.00397	U	0.00397		mg/Kg		03/12/24 12:34	03/13/24 00:44	1
m-Xylene & p-Xylene	<0.00397	U	0.00397		mg/Kg		03/12/24 12:34	03/13/24 00:44	1
o-Xylene	<0.00198	U	0.00198		mg/Kg		03/12/24 12:34	03/13/24 00:44	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*127*		*70 - 130*	*03/12/24 12:34*	*03/13/24 00:44*	*1*
1,4-Difluorobenzene (Surr)	*86*		*70 - 130*	*03/12/24 12:34*	*03/13/24 00:44*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00397	U	0.00397		mg/Kg			03/13/24 00:44	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			03/13/24 16:36	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		03/12/24 15:19	03/13/24 16:36	1
Diesel Range Organics (Over C10-C28)	<50.0	U *1	50.0		mg/Kg		03/12/24 15:19	03/13/24 16:36	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		03/12/24 15:19	03/13/24 16:36	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*101*		*70 - 130*	*03/12/24 15:19*	*03/13/24 16:36*	*1*
o-Terphenyl	*84*		*70 - 130*	*03/12/24 15:19*	*03/13/24 16:36*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**77.1**		5.00		mg/Kg			03/14/24 04:07	1

Client Sample ID: BH 24 - 18 2'

Lab Sample ID: 890-6333-2
Matrix: Solid
Date Collected: 03/06/24 13:45
Date Received: 03/11/24 11:35
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		03/12/24 12:34	03/13/24 01:10	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		03/12/24 12:34	03/13/24 01:10	1
Toluene	<0.00200	U	0.00200		mg/Kg		03/12/24 12:34	03/13/24 01:10	1
Xylenes, Total	<0.00399	U	0.00399		mg/Kg		03/12/24 12:34	03/13/24 01:10	1
m-Xylene & p-Xylene	<0.00399	U	0.00399		mg/Kg		03/12/24 12:34	03/13/24 01:10	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		03/12/24 12:34	03/13/24 01:10	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*122*		*70 - 130*	*03/12/24 12:34*	*03/13/24 01:10*	*1*

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Client Sample Results

Client: Vertex
Project/Site: CORRAL FLY SWD

Job ID: 890-6333-1
SDG: 23 E - 02502

Client Sample ID: BH 24 - 18 2'
Date Collected: 03/06/24 13:45
Date Received: 03/11/24 11:35
Sample Depth: 2'

Lab Sample ID: 890-6333-2
Matrix: Solid

Method: SW846 8021B - Volatile Organic Compounds (GC) (Continued)

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Difluorobenzene (Surr)	*82*		*70 - 130*	*03/12/24 12:34*	*03/13/24 01:10*	*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			03/13/24 01:10	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			03/13/24 16:57	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		03/12/24 15:19	03/13/24 16:57	1
Diesel Range Organics (Over C10-C28)	<50.0	U *1	50.0		mg/Kg		03/12/24 15:19	03/13/24 16:57	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		03/12/24 15:19	03/13/24 16:57	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*109*		*70 - 130*	*03/12/24 15:19*	*03/13/24 16:57*	*1*
o-Terphenyl	*88*		*70 - 130*	*03/12/24 15:19*	*03/13/24 16:57*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**59.1**		4.99		mg/Kg			03/13/24 16:46	1

Surrogate Summary

Client: Vertex
Project/Site: CORRAL FLY SWD

Job ID: 890-6333-1
SDG: 23 E - 02502

Method: 8021B - Volatile Organic Compounds (GC)

Matrix: Solid **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)	
		BFB1	DFBZ1
Lab Sample ID	Client Sample ID	(70-130)	(70-130)
880-40563-A-1-B MS	Matrix Spike	129	101
880-40563-A-1-C MSD	Matrix Spike Duplicate	126	102
890-6333-1	BH 24 - 18 0'	127	86
890-6333-2	BH 24 - 18 2'	122	82
LCS 880-75372/1-A	Lab Control Sample	107	93
LCSD 880-75372/2-A	Lab Control Sample Dup	124	100
MB 880-75372/5-A	Method Blank	71	81

Surrogate Legend

BFB = 4-Bromofluorobenzene (Surr)
DFBZ = 1,4-Difluorobenzene (Surr)

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

Matrix: Solid **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)	
		1CO1	OTPH1
Lab Sample ID	Client Sample ID	(70-130)	(70-130)
880-40636-A-1-B MS	Matrix Spike	112	87
880-40636-A-1-C MSD	Matrix Spike Duplicate	116	88
890-6333-1	BH 24 - 18 0'	101	84
890-6333-2	BH 24 - 18 2'	109	88
LCS 880-75426/2-A	Lab Control Sample	113	122
LCSD 880-75426/3-A	Lab Control Sample Dup	88	92
MB 880-75426/1-A	Method Blank	153 S1+	140 S1+

Surrogate Legend

1CO = 1-Chlorooctane
OTPH = o-Terphenyl

QC Sample Results

Client: Vertex
Project/Site: CORRAL FLY SWD

Job ID: 890-6333-1
SDG: 23 E - 02502

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-75372/5-A
Matrix: Solid
Analysis Batch: 75421

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 75372

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		03/12/24 08:34	03/12/24 17:28	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		03/12/24 08:34	03/12/24 17:28	1
Toluene	<0.00200	U	0.00200		mg/Kg		03/12/24 08:34	03/12/24 17:28	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		03/12/24 08:34	03/12/24 17:28	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		03/12/24 08:34	03/12/24 17:28	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		03/12/24 08:34	03/12/24 17:28	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*71*		*70 - 130*	*03/12/24 08:34*	*03/12/24 17:28*	*1*
1,4-Difluorobenzene (Surr)	*81*		*70 - 130*	*03/12/24 08:34*	*03/12/24 17:28*	*1*

Lab Sample ID: LCS 880-75372/1-A
Matrix: Solid
Analysis Batch: 75421

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 75372

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	0.100	0.1271		mg/Kg		127	70 - 130
Ethylbenzene	0.100	0.1242		mg/Kg		124	70 - 130
Toluene	0.100	0.1295		mg/Kg		130	70 - 130
m-Xylene & p-Xylene	0.200	0.2502		mg/Kg		125	70 - 130
o-Xylene	0.100	0.1254		mg/Kg		125	70 - 130

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*107*		*70 - 130*
1,4-Difluorobenzene (Surr)	*93*		*70 - 130*

Lab Sample ID: LCSD 880-75372/2-A
Matrix: Solid
Analysis Batch: 75421

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 75372

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	0.100	0.1294		mg/Kg		129	70 - 130	2	35
Ethylbenzene	0.100	0.1228		mg/Kg		123	70 - 130	1	35
Toluene	0.100	0.1248		mg/Kg		125	70 - 130	4	35
m-Xylene & p-Xylene	0.200	0.2485		mg/Kg		124	70 - 130	1	35
o-Xylene	0.100	0.1269		mg/Kg		127	70 - 130	1	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*124*		*70 - 130*
1,4-Difluorobenzene (Surr)	*100*		*70 - 130*

Lab Sample ID: 880-40563-A-1-B MS
Matrix: Solid
Analysis Batch: 75421

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 75372

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	<0.00199	U	0.0996	0.1153		mg/Kg		116	70 - 130
Ethylbenzene	<0.00199	U	0.0996	0.1052		mg/Kg		104	70 - 130

QC Sample Results

Client: Vertex
Project/Site: CORRAL FLY SWD

Job ID: 890-6333-1
SDG: 23 E - 02502

Method: 8021B - Volatile Organic Compounds (GC) (Continued)

Lab Sample ID: 880-40563-A-1-B MS
Matrix: Solid
Analysis Batch: 75421

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 75372

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Toluene	0.175	F1	0.0996	0.1635	F1	mg/Kg		-11	70 - 130
m-Xylene & p-Xylene	0.00716		0.199	0.2126		mg/Kg		103	70 - 130
o-Xylene	0.00215		0.0996	0.1062		mg/Kg		104	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*129*		*70 - 130*
1,4-Difluorobenzene (Surr)	*101*		*70 - 130*

Lab Sample ID: 880-40563-A-1-C MSD
Matrix: Solid
Analysis Batch: 75421

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 75372

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	<0.00199	U	0.101	0.1200		mg/Kg		119	70 - 130	4	35
Ethylbenzene	<0.00199	U	0.101	0.1096		mg/Kg		107	70 - 130	4	35
Toluene	0.175	F1	0.101	0.1473	F1	mg/Kg		-27	70 - 130	10	35
m-Xylene & p-Xylene	0.00716		0.202	0.2193		mg/Kg		105	70 - 130	3	35
o-Xylene	0.00215		0.101	0.1107		mg/Kg		108	70 - 130	4	35

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*126*		*70 - 130*
1,4-Difluorobenzene (Surr)	*102*		*70 - 130*

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

Lab Sample ID: MB 880-75426/1-A
Matrix: Solid
Analysis Batch: 75449

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 75426

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		03/12/24 15:18	03/13/24 07:48	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		03/12/24 15:18	03/13/24 07:48	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		03/12/24 15:18	03/13/24 07:48	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*153*	*S1+*	*70 - 130*	*03/12/24 15:18*	*03/13/24 07:48*	*1*
o-Terphenyl	*140*	*S1+*	*70 - 130*	*03/12/24 15:18*	*03/13/24 07:48*	*1*

Lab Sample ID: LCS 880-75426/2-A
Matrix: Solid
Analysis Batch: 75449

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 75426

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics (GRO)-C6-C10	1000	939.4		mg/Kg		94	70 - 130
Diesel Range Organics (Over C10-C28)	1000	1106		mg/Kg		111	70 - 130

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QC Sample Results

Client: Vertex
Project/Site: CORRAL FLY SWD

Job ID: 890-6333-1
SDG: 23 E - 02502

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

Lab Sample ID: LCS 880-75426/2-A
Matrix: Solid
Analysis Batch: 75449

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 75426

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1-Chlorooctane	113		70 - 130
o-Terphenyl	122		70 - 130

Lab Sample ID: LCSD 880-75426/3-A
Matrix: Solid
Analysis Batch: 75449

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 75426

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			1000	903.6		mg/Kg		90	70 - 130	4	20
Diesel Range Organics (Over C10-C28)			1000	866.4	*1	mg/Kg		87	70 - 130	24	20

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
1-Chlorooctane	88		70 - 130
o-Terphenyl	92		70 - 130

Lab Sample ID: 880-40636-A-1-B MS
Matrix: Solid
Analysis Batch: 75449

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 75426

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics (GRO)-C6-C10	<49.7	U	1000	1183		mg/Kg		118	70 - 130
Diesel Range Organics (Over C10-C28)	<49.7	U *1	1000	1082		mg/Kg		105	70 - 130

Surrogate	MS %Recovery	MS Qualifier	Limits
1-Chlorooctane	112		70 - 130
o-Terphenyl	87		70 - 130

Lab Sample ID: 880-40636-A-1-C MSD
Matrix: Solid
Analysis Batch: 75449

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 75426

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	<49.7	U	1000	1189		mg/Kg		119	70 - 130	0	20
Diesel Range Organics (Over C10-C28)	<49.7	U *1	1000	1115		mg/Kg		108	70 - 130	3	20

Surrogate	MSD %Recovery	MSD Qualifier	Limits
1-Chlorooctane	116		70 - 130
o-Terphenyl	88		70 - 130

QC Sample Results

Client: Vertex
Project/Site: CORRAL FLY SWD

Job ID: 890-6333-1
SDG: 23 E - 02502

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-75402/1-A
Matrix: Solid
Analysis Batch: 75466

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			03/14/24 01:27	1

Lab Sample ID: LCS 880-75402/2-A
Matrix: Solid
Analysis Batch: 75466

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	250	259.6		mg/Kg		104	90 - 110

Lab Sample ID: LCSD 880-75402/3-A
Matrix: Solid
Analysis Batch: 75466

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	259.9		mg/Kg		104	90 - 110	0	20

Lab Sample ID: 880-40648-A-4-B MS
Matrix: Solid
Analysis Batch: 75466

Client Sample ID: Matrix Spike
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	16500	F1	5050	22130	F1	mg/Kg		112	90 - 110

Lab Sample ID: 880-40648-A-4-C MSD
Matrix: Solid
Analysis Batch: 75466

Client Sample ID: Matrix Spike Duplicate
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	16500	F1	5050	22110	F1	mg/Kg		112	90 - 110	0	20

Lab Sample ID: MB 880-75425/1-A
Matrix: Solid
Analysis Batch: 75526

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			03/13/24 14:10	1

Lab Sample ID: LCS 880-75425/2-A
Matrix: Solid
Analysis Batch: 75526

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	250	252.6		mg/Kg		101	90 - 110

Lab Sample ID: LCSD 880-75425/3-A
Matrix: Solid
Analysis Batch: 75526

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	254.3		mg/Kg		102	90 - 110	1	20

QC Sample Results

Client: Vertex
Project/Site: CORRAL FLY SWD

Job ID: 890-6333-1
SDG: 23 E - 02502

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: 880-40675-A-8-B MS
Matrix: Solid
Analysis Batch: 75526

Client Sample ID: Matrix Spike
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	221		248	458.6		mg/Kg		96	90 - 110

Lab Sample ID: 880-40675-A-8-C MSD
Matrix: Solid
Analysis Batch: 75526

Client Sample ID: Matrix Spike Duplicate
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	221		248	457.9		mg/Kg		95	90 - 110	0	20

QC Association Summary

Client: Vertex
Project/Site: CORRAL FLY SWD

Job ID: 890-6333-1
SDG: 23 E - 02502

GC VOA

Prep Batch: 75372

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-6333-1	BH 24 - 18 0'	Total/NA	Solid	5035	
890-6333-2	BH 24 - 18 2'	Total/NA	Solid	5035	
MB 880-75372/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-75372/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-75372/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
880-40563-A-1-B MS	Matrix Spike	Total/NA	Solid	5035	
880-40563-A-1-C MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Analysis Batch: 75421

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-6333-1	BH 24 - 18 0'	Total/NA	Solid	8021B	75372
890-6333-2	BH 24 - 18 2'	Total/NA	Solid	8021B	75372
MB 880-75372/5-A	Method Blank	Total/NA	Solid	8021B	75372
LCS 880-75372/1-A	Lab Control Sample	Total/NA	Solid	8021B	75372
LCSD 880-75372/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	75372
880-40563-A-1-B MS	Matrix Spike	Total/NA	Solid	8021B	75372
880-40563-A-1-C MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	75372

Analysis Batch: 75515

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-6333-1	BH 24 - 18 0'	Total/NA	Solid	Total BTEX	
890-6333-2	BH 24 - 18 2'	Total/NA	Solid	Total BTEX	

GC Semi VOA

Prep Batch: 75426

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-6333-1	BH 24 - 18 0'	Total/NA	Solid	8015NM Prep	
890-6333-2	BH 24 - 18 2'	Total/NA	Solid	8015NM Prep	
MB 880-75426/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-75426/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-75426/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
880-40636-A-1-B MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
880-40636-A-1-C MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

Analysis Batch: 75449

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-6333-1	BH 24 - 18 0'	Total/NA	Solid	8015B NM	75426
890-6333-2	BH 24 - 18 2'	Total/NA	Solid	8015B NM	75426
MB 880-75426/1-A	Method Blank	Total/NA	Solid	8015B NM	75426
LCS 880-75426/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	75426
LCSD 880-75426/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	75426
880-40636-A-1-B MS	Matrix Spike	Total/NA	Solid	8015B NM	75426
880-40636-A-1-C MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	75426

Analysis Batch: 75588

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-6333-1	BH 24 - 18 0'	Total/NA	Solid	8015 NM	
890-6333-2	BH 24 - 18 2'	Total/NA	Solid	8015 NM	

QC Association Summary

Client: Vertex
Project/Site: CORRAL FLY SWD

Job ID: 890-6333-1
SDG: 23 E - 02502

HPLC/IC

Leach Batch: 75402

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-6333-1	BH 24 - 18 0'	Soluble	Solid	DI Leach	
MB 880-75402/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-75402/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-75402/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
880-40648-A-4-B MS	Matrix Spike	Soluble	Solid	DI Leach	
880-40648-A-4-C MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	

Leach Batch: 75425

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-6333-2	BH 24 - 18 2'	Soluble	Solid	DI Leach	
MB 880-75425/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-75425/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-75425/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
880-40675-A-8-B MS	Matrix Spike	Soluble	Solid	DI Leach	
880-40675-A-8-C MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	

Analysis Batch: 75466

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-6333-1	BH 24 - 18 0'	Soluble	Solid	300.0	75402
MB 880-75402/1-A	Method Blank	Soluble	Solid	300.0	75402
LCS 880-75402/2-A	Lab Control Sample	Soluble	Solid	300.0	75402
LCSD 880-75402/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	75402
880-40648-A-4-B MS	Matrix Spike	Soluble	Solid	300.0	75402
880-40648-A-4-C MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	75402

Analysis Batch: 75526

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-6333-2	BH 24 - 18 2'	Soluble	Solid	300.0	75425
MB 880-75425/1-A	Method Blank	Soluble	Solid	300.0	75425
LCS 880-75425/2-A	Lab Control Sample	Soluble	Solid	300.0	75425
LCSD 880-75425/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	75425
880-40675-A-8-B MS	Matrix Spike	Soluble	Solid	300.0	75425
880-40675-A-8-C MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	75425

Lab Chronicle

Client: Vertex
Project/Site: CORRAL FLY SWD

Job ID: 890-6333-1
SDG: 23 E - 02502

Client Sample ID: BH 24 - 18 0'

Lab Sample ID: 890-6333-1

Date Collected: 03/06/24 13:35
Matrix: Solid
Date Received: 03/11/24 11:35

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.04 g	5 mL	75372	03/12/24 12:34	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	75421	03/13/24 00:44	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			75515	03/13/24 00:44	SM	EET MID
Total/NA	Analysis	8015 NM		1			75588	03/13/24 16:36	SM	EET MID
Total/NA	Prep	8015NM Prep			10.00 g	10 mL	75426	03/12/24 15:19	EL	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	75449	03/13/24 16:36	SM	EET MID
Soluble	Leach	DI Leach			5.00 g	50 mL	75402	03/12/24 11:47	SA	EET MID
Soluble	Analysis	300.0		1			75466	03/14/24 04:07	CH	EET MID

Client Sample ID: BH 24 - 18 2'

Lab Sample ID: 890-6333-2

Date Collected: 03/06/24 13:45
Matrix: Solid
Date Received: 03/11/24 11:35

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	75372	03/12/24 12:34	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	75421	03/13/24 01:10	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			75515	03/13/24 01:10	SM	EET MID
Total/NA	Analysis	8015 NM		1			75588	03/13/24 16:57	SM	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	75426	03/12/24 15:19	EL	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	75449	03/13/24 16:57	SM	EET MID
Soluble	Leach	DI Leach			5.01 g	50 mL	75425	03/13/24 12:00	SA	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	75526	03/13/24 16:46	SMC	EET MID

Laboratory References:

EET MID = Eurofins Midland, 1211 W. Florida Ave, Midland, TX 79701, TEL (432)704-5440

Accreditation/Certification Summary

Client: Vertex
Project/Site: CORRAL FLY SWD

Job ID: 890-6333-1
SDG: 23 E - 02502

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	T104704400-23-26	06-30-24

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: Vertex
Project/Site: CORRAL FLY SWD

Job ID: 890-6333-1
SDG: 23 E - 02502

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	EPA	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

EPA = US Environmental Protection Agency

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: Vertex
Project/Site: CORRAL FLY SWD

Job ID: 890-6333-1
SDG: 23 E - 02502

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-6333-1	BH 24 - 18 0'	Solid	03/06/24 13:35	03/11/24 11:35	0'
890-6333-2	BH 24 - 18 2'	Solid	03/06/24 13:45	03/11/24 11:35	2'

Released to Imaging: 7/26/2024 3:59:45 PM
Received by OCD: 7/24/2024 3:24:20 PM

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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: _____

www.xenco.com Page _____ of _____

Project Manager:	C. Dixon	Bill to: (if different)	Rob Kirk
Company Name:	Vertex	Company Name:	Solaris
Address:	on file	Address:	
City, State ZIP:		City, State ZIP:	
Phone:		Email:	

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:	Corral Fly SWD	Turn Around	☐Routine ☐Rush
Project Number:	23E-02502		
Project Location:		Due Date:	
Sampler's Name:	A. Mahle	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:	IR#007
Cooler Custody Seals:	Yes No N/A	Correction Factor:	-0.2
Sample Custody Seals:	Yes No N/A	Temperature Reading:	3.0
Total Containers:		Corrected Temperature:	2.8

ANALYSIS REQUEST

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Grab/ Comp	# of Cont	Pres. Code	Parameters: BTEX (8021)	TPH (8015D)	Cl
BH24-18 0'	Soil	3/6/24	13:35	0'	G	1		1	1	1
BH24-18 2'	1	1	13:45	2'	G					

890-6333 Chain of Custody

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

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			11:35 3/14	2		
3				4		
5				6		

Revised Date: 08/25/2020 Rev. 2020.2

Eurofins Carlsbad
1089 N Canal St.
Carlsbad, NM 88220
Phone 575-988-3199 Fax 575-988-3199

Chain of Custody Record

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Client Information (Sub Contract Lab)	Sampler	Lab PM: Kramer, Jessica	Carrier Tracking No(s):	COC No: 890-2680 1
Client Contact: Shipping/Receiving	Phone	E-Mail: Jessica Kramer@et.eurofinsus.com	State of Origin: New Mexico	Page: Page 1 of 1
Company: Eurofins Environment Testing South Centr		Accreditations Required (See note): NELAP - Texas		Job #: 890-6333-1
Address: 1211 W Florida Ave,	Due Date Requested: 3/15/2024			
City: Midland	TAT Requested (days):			
State, Zip: TX 79701				
Phone: 432-704-5440(Tel)	PO #:			
Email:	WO #:			
Project Name: CORRAL FLY SWD	Project #: 89000162			
Site:	SSOW#:			

Analysis Requested

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	8015MOD_NM/8015NM_S_Prep (MOD) Full TPH	300_ORGFM_28D/DI_LEACH Chloride	8021B/5035FP_Calc BTEX - LL	Total_BTEX_GCV	8015MOD_Calc	Total Number of containers	Special Instructions/Note
			Preservation Code:										
BH 24 - 18 0' (890-6333-1)	3/6/24	13 35 Mountain		Solid			X	X	X	X	X	1	
BH 24 - 18 2' (890-6333-2)	3/6/24	13 45 Mountain		Solid			X	X	X	X	X	1	

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, Y - Trizma, Z - other (specify)
Other:

Note: Since laboratory accreditations are subject to change Eurofins Environment Testing South Central LLC places the ownership of method analyte & accreditation compliance upon our 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 Environment Testing South Central LLC laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins Environment Testing South Central LLC attention immediately If all requested accreditations are current to date return the signed Chain of Custody attesting to said compliance to Eurofins Environment Testing South Central 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
	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: 06/08/2021

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Received by OCD: 7/24/2024 3:24:20 PM
3/14/2024
Page 21 of 23
Released to Imaging: 7/26/2024 3:59:45 PM

Login Sample Receipt Checklist

Client: Vertex

Job Number: 890-6333-1
SDG Number: 23 E - 02502

Login Number: 6333
List Number: 1
Creator: Bruns, Shannon

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: Vertex

Job Number: 890-6333-1
SDG Number: 23 E - 02502

Login Number: 6333
List Number: 2
Creator: Teel, Brianna

List Source: Eurofins Midland
List Creation: 03/12/24 11:23 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	

District I
1625 N. French Dr., Hobbs, NM 88240
Phone:(575) 393-6161 Fax:(575) 393-0720
District II
811 S. First St., Artesia, NM 88210
Phone:(575) 748-1283 Fax:(575) 748-9720
District III
1000 Rio Brazos Rd., Aztec, NM 87410
Phone:(505) 334-6178 Fax:(505) 334-6170
District IV
1220 S. St Francis Dr., Santa Fe, NM 87505
Phone:(505) 476-3470 Fax:(505) 476-3462

State of New Mexico
Energy, Minerals and Natural Resources
Oil Conservation Division
1220 S. St Francis Dr.
Santa Fe, NM 87505

QUESTIONS

Action 366973

QUESTIONS

Operator: SOLARIS WATER MIDSTREAM, LLC 9651 Katy Fwy Houston, TX 77024	OGRID: 371643
	Action Number: 366973
	Action Type: [C-141] Remediation Closure Request C-141 (C-141-v-Closure)

QUESTIONS

Prerequisites	
Incident ID (n#)	**nAPP2311343030**
Incident Name	**NAPP2311343030 CORRAL FLY SWD @ 30-015-44626**
Incident Type	**Produced Water Release**
Incident Status	**Remediation Closure Report Received**
Incident Well	**[30-015-44626] CORRAL FLY STATE SWD #001**

Location of Release Source	
Please answer all the questions in this group.	
Site Name	CORRAL FLY SWD
Date Release Discovered	04/22/2023
Surface Owner	State

Incident Details	
Please answer all the questions in this group.	
Incident Type	Produced Water Release
Did this release result in a fire or is the result of a fire	No
Did this release result in any injuries	No
Has this release reached or does it have a reasonable probability of reaching a watercourse	No
Has this release endangered or does it have a reasonable probability of endangering public health	No
Has this release substantially damaged or will it substantially damage property or the environment	No
Is this release of a volume that is or may with reasonable probability be detrimental to fresh water	No

Nature and Volume of Release	
Material(s) released, please answer all that apply below. Any calculations or specific justifications for the volumes provided should be attached to the follow-up C-141 submission.	
Crude Oil Released (bbls) Details	*Not answered.*
Produced Water Released (bbls) Details	Cause: Equipment Failure | Pipeline (Any) | Produced Water | Released: 300 BBL | Recovered: 80 BBL | Lost: 220 BBL.
Is the concentration of chloride in the produced water >10,000 mg/l	Yes
Condensate Released (bbls) Details	*Not answered.*
Natural Gas Vented (Mcf) Details	*Not answered.*
Natural Gas Flared (Mcf) Details	*Not answered.*
Other Released Details	*Not answered.*
Are there additional details for the questions above (i.e. any answer containing Other, Specify, Unknown, and/or Fire, or any negative lost amounts)	*Not answered.*

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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

QUESTIONS (continued)

Operator: SOLARIS WATER MIDSTREAM, LLC 9651 Katy Fwy Houston, TX 77024	OGRID: 371643
	Action Number: 366973
	Action Type: [C-141] Remediation Closure Request C-141 (C-141-v-Closure)

QUESTIONS

Nature and Volume of Release (continued)	
Is this a gas only submission (i.e. only significant Mcf values reported)	**No, according to supplied volumes this does not appear to be a "gas only" report.**
Was this a major release as defined by Subsection A of 19.15.29.7 NMAC	**Yes**
Reasons why this would be considered a submission for a notification of a major release	**From paragraph A. "Major release" determine using:** **(1) an unauthorized release of a volume, excluding gases, of 25 barrels or more.**
With the implementation of the 19.15.27 NMAC (05/25/2021), venting and/or flaring of natural gas (i.e. gas only) are to be submitted on the C-129 form.	

Initial Response	
The responsible party must undertake the following actions immediately unless they could create a safety hazard that would result in injury.	
The source of the release has been stopped	True
The impacted area has been secured to protect human health and the environment	True
Released materials have been contained via the use of berms or dikes, absorbent pads, or other containment devices	True
All free liquids and recoverable materials have been removed and managed appropriately	True
If all the actions described above have not been undertaken, explain why	*Not answered.*
Per Paragraph (4) of Subsection B of 19.15.29.8 NMAC the responsible party may commence remediation immediately after discovery of a release. If remediation has begun, please prepare and attach a narrative of actions to date in the follow-up C-141 submission. If remedial efforts have been successfully completed or if the release occurred within a lined containment area (see Subparagraph (a) of Paragraph (5) of Subsection A of 19.15.29.11 NMAC), please prepare and attach all information needed for closure evaluation in the follow-up C-141 submission.	

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.

I hereby agree and sign off to the above statement	Name: Julian Romero Title: Environmental Advisor Email: julian.romero@ariswater.com Date: 07/24/2024

District I
1625 N. French Dr., Hobbs, NM 88240
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State of New Mexico
Energy, Minerals and Natural Resources
Oil Conservation Division
1220 S. St Francis Dr.
Santa Fe, NM 87505

QUESTIONS (continued)

Operator: SOLARIS WATER MIDSTREAM, LLC 9651 Katy Fwy Houston, TX 77024	OGRID: 371643
	Action Number: 366973
	Action Type: [C-141] Remediation Closure Request C-141 (C-141-v-Closure)

QUESTIONS

Site Characterization	
Please answer all the questions in this group (only required when seeking remediation plan approval and beyond). 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 in feet below ground surface (ft bgs)	Between 51 and 75 (ft.)
What method was used to determine the depth to ground water	NM OSE iWaters Database Search
Did this release impact groundwater or surface water	No
What is the minimum distance, between the closest lateral extents of the release and the following surface areas:	
A continuously flowing watercourse or any other significant watercourse	Between ½ and 1 (mi.)
Any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark)	Greater than 5 (mi.)
An occupied permanent residence, school, hospital, institution, or church	Between 1 and 5 (mi.)
A spring or a private domestic fresh water well used by less than five households for domestic or stock watering purposes	Between ½ and 1 (mi.)
Any other fresh water well or spring	Between ½ and 1 (mi.)
Incorporated municipal boundaries or a defined municipal fresh water well field	Between ½ and 1 (mi.)
A wetland	Between ½ and 1 (mi.)
A subsurface mine	Greater than 5 (mi.)
An (non-karst) unstable area	Between 1 and 5 (mi.)
Categorize the risk of this well / site being in a karst geology	Low
A 100-year floodplain	Between ½ and 1 (mi.)
Did the release impact areas not on an exploration, development, production, or storage site	No

Remediation Plan	
Please answer all the questions that apply or are indicated. This information must be provided to the appropriate district office no later than 90 days after the release discovery date.	
Requesting a remediation plan approval with this submission	Yes
Attach a comprehensive report demonstrating the lateral and vertical extents of soil contamination associated with the release have been determined, pursuant to 19.15.29.11 NMAC and 19.15.29.13 NMAC.	
Have the lateral and vertical extents of contamination been fully delineated	Yes
Was this release entirely contained within a lined containment area	Yes
Per Subsection B of 19.15.29.11 NMAC unless the site characterization report includes completed efforts at remediation, the report must include a proposed remediation plan in accordance with 19.15.29.12 NMAC, which includes the anticipated timelines for beginning and completing the remediation.	
On what estimated date will the remediation commence	07/06/2023
On what date will (or did) the final sampling or liner inspection occur	08/07/2023
On what date will (or was) the remediation complete(d)	08/07/2023
What is the estimated surface area (in square feet) that will be remediated	12943
What is the estimated volume (in cubic yards) that will be remediated	300
These estimated dates and measurements are recognized to be the best guess or calculation at the time of submission and may (be) change(d) over time as more remediation efforts are completed.	
The OCD recognizes that proposed remediation measures may have to be minimally adjusted in accordance with the physical realities encountered during remediation. If the responsible party has any need to significantly deviate from the remediation plan proposed, then it should consult with the division to determine if another remediation plan submission is required.	

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Phone:(575) 393-6161 Fax:(575) 393-0720
District II
811 S. First St., Artesia, NM 88210
Phone:(575) 748-1283 Fax:(575) 748-9720
District III
1000 Rio Brazos Rd., Aztec, NM 87410
Phone:(505) 334-6178 Fax:(505) 334-6170
District IV
1220 S. St Francis Dr., Santa Fe, NM 87505
Phone:(505) 476-3470 Fax:(505) 476-3462

State of New Mexico
Energy, Minerals and Natural Resources
Oil Conservation Division
1220 S. St Francis Dr.
Santa Fe, NM 87505

QUESTIONS (continued)

Operator: SOLARIS WATER MIDSTREAM, LLC 9651 Katy Fwy Houston, TX 77024	OGRID: 371643
	Action Number: 366973
	Action Type: [C-141] Remediation Closure Request C-141 (C-141-v-Closure)

QUESTIONS

Remediation Plan (continued)	
Please answer all the questions that apply or are indicated. This information must be provided to the appropriate district office no later than 90 days after the release discovery date.	
This remediation will (or is expected to) utilize the following processes to remediate / reduce contaminants:	
(Select all answers below that apply.)	
Is (or was) there affected material present needing to be removed	Yes
Is (or was) there a power wash of the lined containment area (to be) performed	No
OTHER (Non-listed remedial process)	No
Per Subsection B of 19.15.29.11 NMAC unless the site characterization report includes completed efforts at remediation, the report must include a proposed remediation plan in accordance with 19.15.29.12 NMAC, which includes the anticipated timelines for beginning and completing the remediation.	
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.	
I hereby agree and sign off to the above statement	Name: Julian Romero Title: Environmental Advisor Email: julian.romero@ariswater.com Date: 07/24/2024
The OCD recognizes that proposed remediation measures may have to be minimally adjusted in accordance with the physical realities encountered during remediation. If the responsible party has any need to significantly deviate from the remediation plan proposed, then it should consult with the division to determine if another remediation plan submission is required.	

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QUESTIONS (continued)

Operator: SOLARIS WATER MIDSTREAM, LLC 9651 Katy Fwy Houston, TX 77024	OGRID: 371643
	Action Number: 366973
	Action Type: [C-141] Remediation Closure Request C-141 (C-141-v-Closure)

QUESTIONS

Liner Inspection Information	
Last liner inspection notification (C-141L) recorded	***{Unavailable.}***
Was all the impacted materials removed from the liner	*Unavailable.*

Remediation Closure Request	
Only answer the questions in this group if seeking remediation closure for this release because all remediation steps have been completed.	
Requesting a remediation closure approval with this submission	Yes
Have the lateral and vertical extents of contamination been fully delineated	**Yes**
Was this release entirely contained within a lined containment area	**Yes**
What was the total surface area (in square feet) remediated	12943
What was the total volume (cubic yards) remediated	300
Summarize any additional remediation activities not included by answers (above)	Site was scraped to meet NMOCD's 51-100 feet on-pad criteria.

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 (in .pdf format) 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.

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.

I hereby agree and sign off to the above statement	Name: Julian Romero Title: Environmental Advisor Email: julian.romero@ariswater.com Date: 07/24/2024

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CONDITIONS

Action 366973

CONDITIONS

Operator:	OGRID:
SOLARIS WATER MIDSTREAM, LLC 9651 Katy Fwy Houston, TX 77024	371643
	Action Number: 366973
	Action Type: [C-141] Remediation Closure Request C-141 (C-141-v-Closure)

CONDITIONS

Created By	Condition	Condition Date
scwells	None	7/26/2024