

Environmental Site Remediation Work Plan

General Information

NMOCD District:	District 1
Landowner:	BLM
Client:	Solaris Water Midstream
Date:	9/23/2024
Client Contact:	Rob Kirk
Vertex PM:	Chance Dixon

Incident ID:	nAPP2320940667
RP Reference:	N/A
Site Location:	Endurance Lariat Water Line
Project #:	24E-03247
Phone #:	(469) 978-5620
Phone #:	(575) 988-1472

Objective

The objective of the environmental remediation work plan is to identify exceedances found during the site assessment/characterization activity and propose an appropriate remediation technique to address these areas. Areas of environmental concern identified and delineated include the underground polyline that failed and caused a release of 210 barrels (bbl.) of produced water into pastureland adjacent to the access road and right of way (ROW). Closure criteria has been selected as per New Mexico Administrative Code (NMAC) 19.15.29. All applicable research as it pertains to closure criteria selection is presented in Attachment 1. The closure criteria for the site is presented below.

Table 2. Closure Criteria for Soils to Remediation & Reclamation Standards		
	Constituent	Limit
0-4 feet bgs (19.15.29.13)	Chloride	600 mg/kg
	TPH (GRO+DRO+MRO)	100 mg/kg
DTGW > 100 feet (19.15.29.12)	Chloride	20,000 mg/kg
	TPH (GRO+DRO+MRO)	2,500 mg/kg
	GRO+DRO	1,000 mg/kg
	BTEX	50 mg/kg
	Benzene	10 mg/kg

Site Assessment/Characterization

Site characterization was completed on September 16, 2024. A total of 38 sample points were established, and samples collected for field screening. Test pits (TP24-01 through TP24-09) were utilized with mechanical equipment to vertically delineate the site along with multiple boreholes thereafter. Samples at the deepest vertical distance below closure criteria were submitted to the laboratory for analysis. In total, 100 samples were submitted to Eurofins Laboratory in Albuquerque, New Mexico for analysis. The sample locations are presented in Attachment 2. Laboratory analysis results have been compared to the above-noted closure criteria and the results from the characterization activity are presented in Attachment 3. Exceedances are identified in the table as bold with a green background.

Closure Criteria Determination

The depth to groundwater (DTGW) was determined by drilling a borehole permitted by the New Mexico Office of the State Engineer (NMOSE) within 0.5 miles of the release area. The borehole was drilled to a depth of 105 feet and it was left to recharge as per the requirements on the WR-07 Application for Permit to Drill a Well with No Water Rights, and an interface probe was utilized to determine whether groundwater was present after the 72-hour recharge period. No water was found to be present. The borehole was plugged and abandoned according to the WD-08 permit, Well Plugging Plan of Operations, filed with NMOSE. Documentation related to the exploratory borehole is included in Attachment 5.

Environmental Site Remediation Work Plan
Remedial Activities

Areas identified with contaminant concentrations above closure criteria will be remediated through excavation. Laboratory results from the site assessment/characterization have been referenced to estimate both the vertical and horizontal limits of the impacts and the volume of soil to be removed. Soil will be excavated to the extents of the known contamination in exceedance. Field screening will be utilized to confirm removal of contaminated soil below the applicable closure criteria. Contaminated soil will be stored on a 30mil liner prior to disposal at an approved facility. Once excavation is complete, confirmatory samples will be collected and laboratory analysis completed to confirm closure criteria guidelines are met. Excavations will be backfilled with clean soil sourced locally.

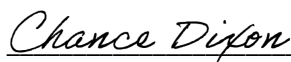
Exceedances to closure criteria were found at 14 sample points within the release area. A hydro vac truck will be utilized to remove contaminated soil in close proximity to the pipelines in the area. Heavy mechanical equipment will be used to complete excavation in open areas within the release area. Field screening will be utilized to find the horizontal and vertical extents of the spill area. Confirmatory samples will be collected as per NMOCD guidance and submitted for laboratory analysis of all applicable parameters. The estimated volume to be excavated is 4,350 cubic yards.

Sample Point	Excavation Depth	Remediation Method
TP24-01	5	Excavator
TP24-02	7	Excavator
TP24-03	7	Excavator
TP24-04	3	Excavator
TP24-05	1	Excavator
TP24-07	5	Excavator
TP24-08	9	Excavator
TP24-09	7	Excavator
BH24-28	2	Excavator

Variance Request

Due to the large area of the proposed excavation, Vertex respectfully requests a confirmatory sampling variance of 400 square feet per base sample. Wall samples will be collected every 200 square feet as per NMOCD guidance and all confirmatory samples will be submitted for laboratory analysis of all applicable parameters.

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



Chance Dixon, B.Sc.

PROJECT MANAGER, REPORTING

10/1/2024

Date



Environmental Site Remediation Work Plan

Attachments

Attachment 1: Closure Criteria Research

Attachment 2: Sample Locations - Remediation Plan Figure 1

Attachment 3: Laboratory Results Table and Laboratory Analysis

Attachment 4: Daily Field Reports with Photo Documentation

Attachment 5: Laboratory Data Reports and Chain of Custody Forms

Attachment 1



- ◆ Borehole (Prefixed by "BH24-")
 ■ Testpit (Prefixed by "TP24-")
 - - Aboveground Pipeline (Former)
 - - Pipeline (Aboveground)
 - - Pipeline (Underground)
 [Red Dashed Outline] Release Area (19,914 sq. ft.)



0 25 50 100 ft
 NAD 1983 UTM Zone 13N
 Date: Aug 08/24

Map Center:
 Lat/Long
 32.105007°, -103.354879°



Characterization Sampling Site Schematic Endurance Lariat Water Line

FIGURE:

1



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, Vertex Professional Services Ltd., 2024.

VERSATILITY. EXPERTISE.

Attachment 2

Client Name: Solaris Water Midstream Company

Site Name: Endurance Lariat Water Line

NMOCD Tracking #: nAPP2320940667

Project #: 24E-03247

Lab Reports: 885-7160-1, 885-7243-1, 885-7337-1, 885-7929-1, 885-8089-1, 885-9568-1, 885-11064-1, 885-12156-1

Sample Description			Field Screening			Petroleum Hydrocarbons							Inorganic
Sample ID	Depth (ft)	Sample Date	Volatile Organic Compounds (PID)	Extractable Organic Compounds (Petroflag)	Chloride Concentration	Volatile		Extractable					
						Benzene	BTEX (Total)	Gasoline Range Organics (GRO)	Diesel Range Organics (DRO)	Motor Oil Range Organics (MRO)	(GRO + DRO)	Total Petroleum Hydrocarbons (TPH)	
			(ppm)	(ppm)	(ppm)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	
BH24-01	0	06.27.2024	-	-	25	ND	ND	ND	ND	ND	ND	ND	ND
BH24-01	2	06.27.2024	-	-	84	ND	ND	ND	ND	ND	ND	ND	ND
BH24-01	4	06.27.2024	-	-	135	ND	ND	ND	ND	ND	ND	ND	ND
BH24-02	0	06.27.2024	-	-	65	ND	ND	ND	ND	ND	ND	ND	ND
BH24-02	2	06.27.2024	-	-	60	ND	ND	ND	ND	ND	ND	ND	ND
BH24-02	4	06.27.2024	-	-	88	ND	ND	ND	ND	ND	ND	ND	ND
BH24-03	0	06.27.2024	-	8,860	60	ND	0.35	17	3900	1800	3917	5517	ND
BH24-03	2	06.27.2024	-	-	65	ND	ND	ND	730	390	730	1120	ND
BH24-03	4	06.27.2024	-	-	100	ND	ND	ND	1700	920	1700	2620	ND
BH24-04	0	06.27.2024	-	-	150	ND	ND	ND	ND	ND	ND	ND	ND
BH24-04	2	06.27.2024	-	-	113	ND	ND	ND	ND	ND	ND	ND	ND
BH24-04	4	06.27.2024	-	-	113	ND	ND	ND	ND	ND	ND	ND	ND
BH24-05	0	06.27.2024	-	46	225	ND	ND	ND	ND	ND	ND	ND	ND
BH24-05	2	06.27.2024	-	-	164	ND	ND	ND	ND	ND	ND	ND	ND
BH24-05	4	06.27.2024	-	-	75	ND	ND	ND	ND	ND	ND	ND	ND
BH24-06	0	06.27.2024	-	29	113	ND	ND	ND	ND	ND	ND	ND	ND
BH24-06	2	06.27.2024	-	-	84	ND	ND	ND	ND	ND	ND	ND	ND
BH24-06	4	06.27.2024	-	-	72	ND	ND	ND	ND	ND	ND	ND	ND
BH24-07	0	06.27.2024	-	47	183	ND	ND	ND	ND	ND	ND	ND	ND
BH24-07	2	06.27.2024	-	-	95	ND	ND	ND	ND	ND	ND	ND	ND
BH24-07	4	06.27.2024	-	-	103	ND	ND	ND	ND	ND	ND	ND	ND
BH24-08	0	06.27.2024	-	-	168	ND	ND	ND	ND	ND	ND	ND	ND
BH24-08	2	06.27.2024	-	-	170	ND	ND	ND	ND	ND	ND	ND	ND
BH24-08	4	06.27.2024	-	-	110	ND	ND	ND	ND	ND	ND	ND	ND
BH24-09	0	06.28.2024	-	-	450	ND	ND	13	3800	1900	3817	5717	260
BH24-09	2	06.28.2024	-	-	524	ND	0.24	52	3200	1400	3252	4652	760
BH24-09	4	06.28.2024	-	-	825	-	-	-	-	-	-	-	-
BH24-10	0	06.28.2024	-	-	43	ND	ND	ND	ND	ND	ND	ND	ND
BH24-10	2	06.28.2024	-	-	90	ND	ND	ND	ND	ND	ND	ND	ND
BH24-10	4	06.28.2024	-	-	90	-	-	-	-	-	-	-	-
BH24-11	0	06.28.2024	-	-	83	ND	ND	ND	600	510	600	1110	220
BH24-11	2	06.28.2024	-	-	653	ND	ND	ND	ND	ND	ND	ND	810
BH24-11	4	06.28.2024	-	-	692	-	-	-	-	-	-	-	-
BH24-12	0	06.28.2024	-	-	185	ND	ND	ND	ND	ND	ND	ND	150
BH24-12	2	06.28.2024	-	-	1027	ND	0.58	73	4200	1700	4217	5971	1700
BH24-12	4	06.28.2024	-	-	1758	-	-	-	-	-	-	-	-
BH24-13	0	06.28.2024	-	-	245	ND	ND	ND	ND	ND	ND	ND	440
BH24-13	2	06.28.2024	-	-	1285	ND	ND	ND	ND	ND	ND	ND	2400
BH24-13	4	06.28.2024	-	-	1767	-	-	-	-	-	-	-	-
BH24-14	0	06.28.2024	-	-	580	ND	ND	ND	45	46	45	91	1500
BH24-14	2	06.28.2024	-	-	1336	ND	ND	ND	ND	ND	ND	ND	1900
BH24-14	4	06.28.2024	-	-	2695	-	-	-	-	-	-	-	-
BH24-15	0	06.28.2024	-	-	600	ND	ND	ND	100	93	100	193	150
BH24-15	2	06.28.2024	-	-	1872	ND	ND	ND	38	ND	38	38	2400
BH24-15	4	06.28.2024	-	-	4630	-	-	-	-	-	-	-	-
BH24-16	0	06.28.2024	-	-	525	ND	ND	ND	180	130	180	310	150
BH24-16	2	06.28.2024	-	-	952	ND	4.9	220	3200	1300	3420	4720	2600
BH24-16	4	06.28.2024	-	-	1880	-	-	-	-	-	-	-	-
BH24-17	0	06.28.2024	-	-	98	ND	ND	ND	15	ND	15	15	ND
BH24-17	2	06.28.2024	-	-	50	ND	ND	ND	ND	ND	ND	ND	ND
BH24-17	4	06.28.2024	-	-	55	-	-	-	-	-	-	-	-

Sample Description			Field Screening			Petroleum Hydrocarbons							Inorganic
Sample ID	Depth (ft)	Sample Date	Volatile Organic Compounds (PID)	Extractable Organic Compounds (PetroFlag)	Chloride Concentration	Volatile		Extractable					
						Benzene	BTEX (Total)	Gasoline Range Organics (GRO)	Diesel Range Organics (DRO)	Motor Oil Range Organics (MRO)	(GRO + DRO)	Total Petroleum Hydrocarbons (TPH)	
			(ppm)	(ppm)	(ppm)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	
BH24-18	0	07.01.2024	-	124	225	ND	ND	ND	22	ND	22	22	ND
BH24-18	2	07.01.2024	-	-	170	ND	ND	ND	13	ND	13	13	ND
BH24-18	4	07.01.2024	-	-	110	ND	ND	ND	ND	ND	ND	ND	18
BH24-19	0	07.01.2024	-	199	373	ND	ND	ND	ND	ND	ND	ND	3200
BH24-19	2	07.01.2024	-	-	588	ND	ND	ND	320	160	320	480	390
BH24-19	4	07.01.2024	-	-	600	ND	ND	5.9	310	160	165.9	475.9	370
BH24-20	0	07.01.2024	-	90	180	ND	ND	ND	ND	ND	ND	ND	ND
BH24-20	2	07.01.2024	-	-	127	ND	ND	ND	ND	ND	ND	ND	ND
BH24-20	4	07.01.2024	-	-	105	ND	ND	ND	ND	ND	ND	ND	ND
BH24-21	0	07.01.2024	-	41	176	ND	ND	ND	ND	ND	ND	ND	60
BH24-21	2	07.01.2024	-	-	127	ND	ND	ND	ND	ND	ND	ND	ND
BH24-21	4	07.01.2024	-	-	105	ND	ND	ND	ND	ND	ND	ND	ND
BH24-22	0	07.01.2024	-	58	193	ND	ND	ND	ND	ND	ND	ND	97
BH24-22	2	07.01.2024	-	-	110	ND	ND	ND	ND	ND	ND	ND	ND
BH24-22	4	07.01.2024	-	-	100	ND	ND	ND	ND	ND	ND	ND	ND
BH24-23	0	07.01.2024	-	127	147	ND	ND	ND	14	ND	14	14	96
BH24-23	2	07.01.2024	-	-	110	ND	ND	ND	ND	ND	ND	ND	ND
BH24-23	4	07.01.2024	-	-	63	ND	ND	ND	ND	ND	ND	ND	ND
BH24-24	0	07.01.2024	-	57	138	ND	ND	ND	10	ND	10	10	ND
BH24-24	2	07.01.2024	-	-	125	ND	ND	ND	ND	ND	ND	ND	ND
BH24-24	4	07.01.2024	-	-	90	ND	ND	ND	ND	ND	ND	ND	ND
BH24-25	0	07.01.2024	-	34	60	ND	ND	ND	ND	ND	ND	ND	ND
BH24-25	2	07.01.2024	-	-	82	ND	ND	ND	ND	ND	ND	ND	ND
BH24-25	4	07.01.2024	-	-	168	ND	ND	ND	ND	ND	ND	ND	ND
BH24-26	0	07.01.2024	-	62	168	ND	ND	ND	12	ND	12	12	ND
BH24-26	2	07.01.2024	-	-	138	ND	ND	ND	ND	ND	ND	ND	ND
BH24-26	4	07.01.2024	-	-	110	ND	ND	ND	ND	ND	ND	ND	ND
BH24-27	0	08.30.2024	-	82	162	ND	ND	ND	14	ND	14	14	ND
BH24-27	2	08.30.2024	-	109	175	ND	ND	ND	150	82	150	232	85
BH24-28	0	08.30.2024	-	624	3,437	ND	ND	ND	400	330	400	730	2900
BH24-28	2	08.30.2024	-	56	488	ND	ND	ND	25	ND	25	25	420
BH24-28	4	08.30.2024	-	18	210	ND	ND	ND	ND	ND	ND	ND	100
BH24-29	0	09.16.2024	-	24	250	ND	ND	ND	ND	ND	ND	ND	ND
BH24-29	2	09.16.2024	-	6	205	ND	ND	ND	ND	ND	ND	ND	ND
TP24-01	4	07.11.2024	-	9,999	393	ND	0.37	26	1000	340	1026	1366	310
TP24-01	6	07.11.2024	-	276	300	ND	ND	ND	170	85	170	255	240
TP24-02	0	07.11.2024	-	9,999	427	ND	3.4	60	6300	3100	6360	9460	2100
TP24-02	2	07.11.2024	-	9,999	118	-	-	-	-	-	-	-	-
TP24-02	4	07.11.2024	-	9,999	207	-	-	-	-	-	-	-	-
TP24-02	6	07.11.2024	-	9,999	125	0.027	15	530	4300	1400	4830	6230	2600
TP24-02	8	07.11.2024	-	9,999	518	-	-	-	-	-	-	-	-
TP24-02	10	07.11.2024	-	9,999	477	-	-	-	-	-	-	-	-
TP24-02	12	07.11.2024	-	394	281	ND	0.14	5.4	450	210	455	665	350
TP24-03	6	07.11.2024	-	9,999	125	ND	1.7	390	3300	1300	3690	4990	74
TP24-03	8	07.11.2024	-	9,999	118	-	-	-	-	-	-	-	-
TP24-03	9	07.11.2024	-	469	136	ND	0.15	6.2	450	210	456	666	ND
TP24-04	4	07.15.2024	-	91	2,322	ND	ND	ND	ND	ND	ND	ND	2800
TP24-05	0	07.15.2024	-	529	273	ND	0.99	ND	150	190	150	240	230
TP24-05	2	07.15.2024	-	57	605	ND	ND	ND	ND	ND	ND	ND	390
TP24-05	4	07.15.2024	-	59	523	ND	ND	ND	ND	ND	ND	ND	580
TP24-06	0	07.15.2024	-	21	507	ND	ND	ND	ND	ND	ND	ND	ND
TP24-06	2	07.15.2024	-	26	390	ND	ND	ND	ND	ND	ND	ND	ND
TP24-06	4	07.15.2024	-	54	268	ND	ND	ND	ND	ND	ND	ND	ND
TP24-07	0	07.15.2024	-	625	1562	ND	0.7	6.6	440	420	446	866	410
TP24-07	2	07.15.2024	-	177	1028	ND	ND	ND	48	ND	48	48	630
TP24-07	4	07.15.2024	-	188	1448	ND	ND	11	1500	700	1511	2211	2,200
TP24-07	6	08.07.2024	-	225	5338	ND	ND	ND	10	ND	10	10	3,500
TP24-07	8	08.07.2024	-	75	4770	ND	ND	ND	150	110	150	260	1,900

Table 2. Initial Characterization Sample Field Screen and Laboratory Results - Depth to Groundwater >100 feet bgs (Reclamation)													
Sample Description			Field Screening			Petroleum Hydrocarbons							Inorganic
Sample ID	Depth (ft)	Sample Date	Volatile Organic Compounds	Extractable Organic Compounds (PetroFlag)	Chloride Concentration	Volatile		Extractable					
						Benzene	BTEX (Total)	Gasoline Range Organics (GRO)	Diesel Range Organics (DRO)	Motor Oil Range Organics (MRO)	(GRO + DRO)	Total Petroleum Hydrocarbons (TPH)	
			(ppm)	(ppm)	(ppm)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	
TP24-08	4	07.15.2024	-	8690	1365	ND	19	560	5800	1700	6360	8060	2,100
TP24-08	6	07.15.2024	-	6120	1242	-	-	-	-	-	-	-	-
TP24-08	8	07.15.2024	-	6650	408	-	-	-	-	-	-	-	-
TP24-08	8	08.30.2024	-	1185	4500	0.037	15.757	300	56000	26000	56300	82300	4,500
TP24-08	10	07.15.2024	-	1250	252	-	-	-	-	-	-	-	-
TP24-08	12	07.15.2024	-	452	205	ND	0.32	14	420	180	434	614	ND
TP24-09	0	07.15.2024	-	465	2408	ND	ND	ND	69	81	69	150	1,000
TP24-09	2	07.15.2024	-	5650	1206	-	-	-	-	-	-	-	-
TP24-09	4	07.15.2024	-	5526	658	-	-	-	-	-	-	-	-
TP24-09	6	07.15.2024	-	3380	357	ND	4	200	4000	1500	4200	5700	3,700
TP24-09	8	07.15.2024	-	2400	600	-	-	-	-	-	-	-	-
TP24-09	10	07.15.2024	-	1215	372	-	-	-	-	-	-	-	-
TP24-09	12	07.15.2024	-	295	331	ND	ND	ND	300	150	300	450	980

"ND" Not Detected at the Reporting Limit

"-" indicates not analyzed/assessed

Bold and green shaded indicates exceedance outside of NMOCD Reclamation Criteria (off-pad)

Attachment 3

Closure Criteria Determination			
Site Name: Endurance Lariat Water Line			
Spill Coordinates: 32.10449 -103.35432		X: UTM easting	Y: UTM northing
Site Specific Conditions		Value	Unit
1	Depth to Groundwater (nearest reference)	>105	feet
	Distance between release and nearest DTGW reference	872	feet
		0.17	miles
	Date of nearest DTGW reference measurement	August 19, 2024	
2	Within 300 feet of any continuously flowing watercourse or any other significant watercourse	5,740	feet
3	Within 200 feet of any lakebed, sinkhole or playa lake (measured from the ordinary high-water mark)	50,502	feet
4	Within 300 feet from an occupied residence, school, hospital, institution or church	30,229	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	80,774	feet
	ii) Within 1000 feet of any fresh water well or spring	80,774	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	14,467	feet
8	Within the area overlying a subsurface mine	No	(Y/N)
	Distance between release and nearest registered mine	187,001	feet
9	Within an unstable area (Karst Map)	Low	Critical High Medium Low
	Distance between release and nearest unstable area	166,926	feet
10	Within a 100-year Floodplain	500	year
	Distance between release and nearest FEMA Zone A (100-year Floodplain)	46,534	feet
11	Soil Type	PU	
12	Ecological Classification	Loamy Sandy	
13	Geology	Qep	
	NMAC 19.15.29.12 E (Table 1) Closure Criteria	>100'	<50' 51-100' >100'

Endurance Lariat Line

C-04861 0.5-Mile Radius

Legend

-  0.5-Mile Radius
-  DTGW Exploratory Borehole
-  Release Area

DTGW Exploratory Borehole

Google Earth

1000 ft





PLUGGING RECORD



NOTE: A Well Plugging Plan of Operations shall be approved by the State Engineer prior to plugging - 19.27.4 NMAC

I. GENERAL / WELL OWNERSHIP:

State Engineer Well Number: C-04861 POD1

Well owner: Solaris water midstream Company

Phone No.: _____

Mailing address: 3300 N.A. St. Bldg6, Unit 6

City: Midland State: TX Zip code: 79705

II. WELL PLUGGING INFORMATION:

1) Name of well drilling company that plugged well: Vision Resources

2) New Mexico Well Driller License No.: 1833 Expiration Date: 10-7-25

3) Well plugging activities were supervised by the following well driller(s)/rig supervisor(s): Jason Maley

4) Date well plugging began: 8-19-24 Date well plugging concluded: 8-19-24

5) GPS Well Location: Latitude: 32 deg, 6 min, 28.5 sec
Longitude: -103 deg, 21 min, 14.48 sec, WGS 84

6) Depth of well confirmed at initiation of plugging as: 105' ft below ground level (bgl),
by the following manner: Tape

7) Static water level measured at initiation of plugging: N/A ft bgl

8) Date well plugging plan of operations was approved by the State Engineer: 7-20-24

9) Were all plugging activities consistent with an approved plugging plan? Yes If not, please describe differences between the approved plugging plan and the well as it was plugged (attach additional pages as needed):

- 10) Log of Plugging Activities - Label vertical scale with depths, and indicate separate plugging intervals with horizontal lines as necessary to illustrate material or methodology changes. Attach additional pages if necessary.

For each interval plugged, describe within the following columns:

Depth (ft bgl)	Plugging Material Used (include any additives used)	Volume of Material Placed (gallons)	Theoretical Volume of Borehole/ Casing (gallons)	Placement Method (tremie pipe, other)	Comments ("casing perforated first", "open annular space also plugged", etc.)
0		155	155	Tremie pipe Open Hole	
Wyoming Bentonite					
105'					

MULTIPLY	BY	AND OBTAIN
cubic feet x 7.4805	=	gallons
cubic yards x 201.97	=	gallons

III. SIGNATURE:

I, Jason Maley, say that I am familiar with the rules of the Office of the State Engineer pertaining to the plugging of wells and that each and all of the statements in this Plugging Record and attachments are true to the best of my knowledge and belief.

Signature of Well Driller

Date



WELL RECORD & LOG

OFFICE OF THE STATE ENGINEER

www.ose.state.nm.us

1. GENERAL AND WELL LOCATION	OSE POD NO. (WELL NO.) C 04861 - POD1		WELL TAG ID NO.		OSE FILE NO(S) C-4861				
	WELL OWNER NAME(S) Solaris Water Midstream Company				PHONE (OPTIONAL)				
	WELL OWNER MAILING ADDRESS 3300 N.A. St. Bldg6, Unit 6				CITY Midland	STATE TX	ZIP 79705		
	WELL LOCATION (FROM GPS)	DEGREES 32	MINUTES 6	SECONDS 28.5	N	* ACCURACY REQUIRED: ONE TENTH OF A SECOND			
		LONGITUDE -103	21	14.48	W	* DATUM REQUIRED: WGS 84			
DESCRIPTION RELATING WELL LOCATION TO STREET ADDRESS AND COMMON LANDMARKS - PLSS (SECTION, TOWNSHIP, RANGE) WHERE AVAILABLE									
2. DRILLING & CASING INFORMATION	LICENSE NO. 1833		NAME OF LICENSED DRILLER Jason Maley			NAME OF WELL DRILLING COMPANY Vision Resources			
	DRILLING STARTED 8-14-24		DRILLING ENDED 8-14-24		DEPTH OF COMPLETED WELL (FT) 105'		BORE HOLE DEPTH (FT) 105'		
					DEPTH WATER FIRST ENCOUNTERED (FT) N/A				
	COMPLETED WELL IS: ☐ ARTESIAN *add Centralizer info below ☒ DRY HOLE ☐ SHALLOW (UNCONFINED)					STATIC WATER LEVEL IN COMPLETED WELL (FT) 0'		DATE STATIC MEASURED 8-14-24	
	DRILLING FLUID: ☒ AIR ☐ MUD ADDITIVES - SPECIFY:								
	DRILLING METHOD: ☒ ROTARY ☐ HAMMER ☐ CABLE TOOL ☐ OTHER - SPECIFY:						CHECK HERE IF PITLESS ADAPTER IS INSTALLED ☐		
	DEPTH (feet bgl)		BORE HOLE DIAM. (inches)	CASING MATERIAL AND/OR GRADE (include each casing string, and note sections of screen)	CASING CONNECTION TYPE (add coupling diameter)	CASING INSIDE DIAM. (inches)	CASING WALL THICKNESS (inches)	SLOT SIZE (inches)	
	FROM	TO							
	0	95	6"	PVC 2" SCH40	Thread	2"	SCH40	N/A	
	95	105	6"	PVC 2" SCH40	Thread	2"	SCH40	.02	
3. ANNULAR MATERIAL	DEPTH (feet bgl)		BORE HOLE DIAM. (inches)	LIST ANNULAR SEAL MATERIAL AND GRAVEL PACK SIZE-RANGE BY INTERVAL <i>*(if using Centralizers for Artesian wells- indicate the spacing below)</i>	AMOUNT (cubic feet)	METHOD OF PLACEMENT			
	FROM	TO							
				None pulled and plugged					

FOR OSE INTERNAL USE

WR-20 WELL RECORD & LOG (Version 09/22/2022)

FILE NO.	POD NO.	TRN NO.
LOCATION	WELL TAG ID NO.	PAGE 1 OF 2

4. HYDROGEOLOGIC LOG OF WELL	DEPTH (feet bgl)		THICKNESS (feet)	COLOR AND TYPE OF MATERIAL ENCOUNTERED - INCLUDE WATER-BEARING CAVITIES OR FRACTURE ZONES (attach supplemental sheets to fully describe all units)	WATER BEARING? (YES / NO)	ESTIMATED YIELD FOR WATER- BEARING ZONES (gpm)
	FROM	TO				
	0	30	30'	Small Tan sand with white caliche rock	Y~ ✓ N	
	30	50	20'	Red and Brown clay with small caliche rock	Y ✓ N	
	50	105	55'	Gray Clay with caliche rock	Y ✓ N	
					Y N	
					Y N	
					Y N	
					Y N	
					Y N	
					Y N	
					Y N	
					Y N	
					Y N	
					Y N	
					Y N	
					Y N	
					Y N	
					Y N	
					Y N	
					Y N	
					Y N	
					Y N	
					Y N	
METHOD USED TO ESTIMATE YIELD OF WATER-BEARING STRATA:					TOTAL ESTIMATED WELL YIELD (gpm): 0	
☐ PUMP ☐ AIR LIFT ☐ BAILER ☐ OTHER – SPECIFY: Dry hole						
5. TEST; RIG SUPERVISION	WELL TEST		TEST RESULTS - ATTACH A COPY OF DATA COLLECTED DURING WELL TESTING, INCLUDING DISCHARGE METHOD, START TIME, END TIME, AND A TABLE SHOWING DISCHARGE AND DRAWDOWN OVER THE TESTING PERIOD.			
	MISCELLANEOUS INFORMATION:					
	PRINT NAME(S) OF DRILL RIG SUPERVISOR(S) THAT PROVIDED ONSITE SUPERVISION OF WELL CONSTRUCTION OTHER THAN LICENSEE: Jason Maley					
6. SIGNATURE	THE UNDERSIGNED HEREBY CERTIFIES THAT, TO THE BEST OF HIS OR HER KNOWLEDGE AND BELIEF, THE FOREGOING IS A TRUE AND CORRECT RECORD OF THE ABOVE DESCRIBED HOLE AND THAT HE OR SHE WILL FILE THIS WELL RECORD WITH THE STATE ENGINEER AND THE PERMIT HOLDER WITHIN 30 DAYS AFTER COMPLETION OF WELL DRILLING:  SIGNATURE OF DRILLER / PRINT SIGNEE NAME Jason Maley DATE					

FOR OSE INTERNAL USE

WR-20 WELL RECORD & LOG (Version 09/22/2022)

FILE NO.

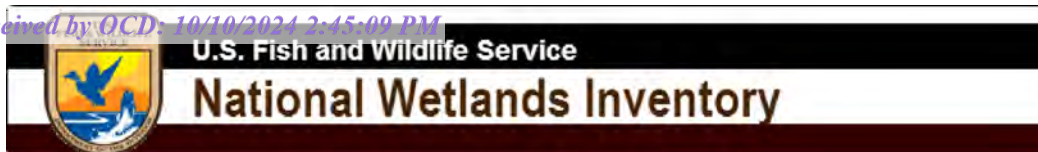
POD NO.

TRN NO.

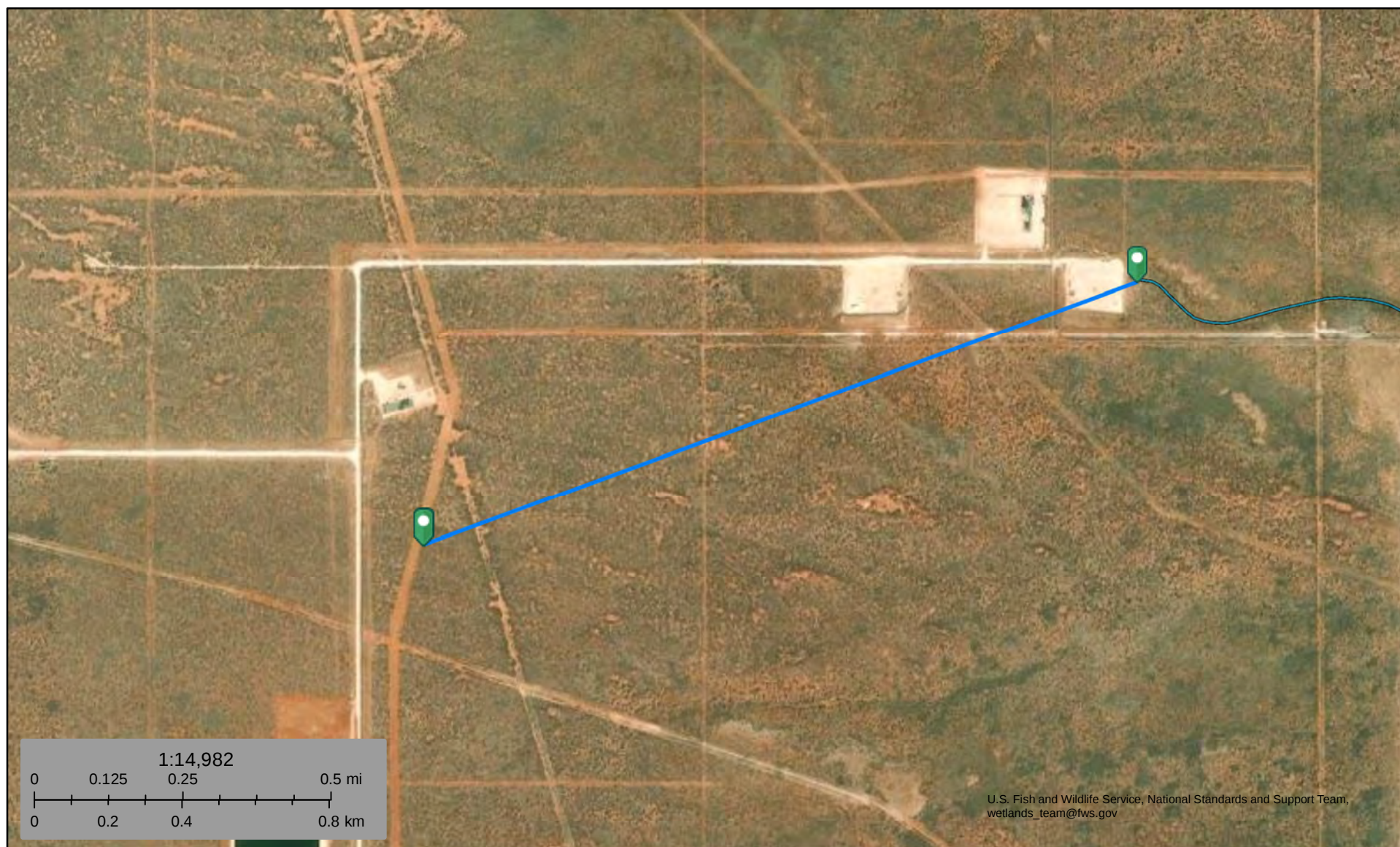
LOCATION

WELL TAG ID NO.

PAGE 2 OF 2



Distance from release to water Course 574



June 26, 2024

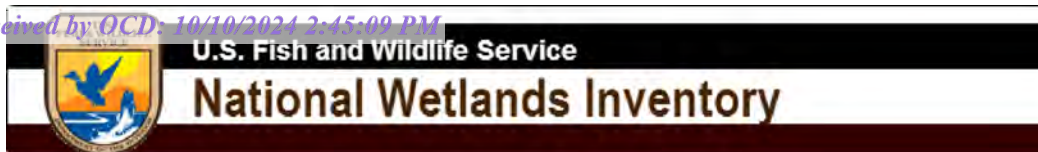
Wetlands

- 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.



Play Lake 50,502 ft



June 26, 2024

Wetlands

- 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.

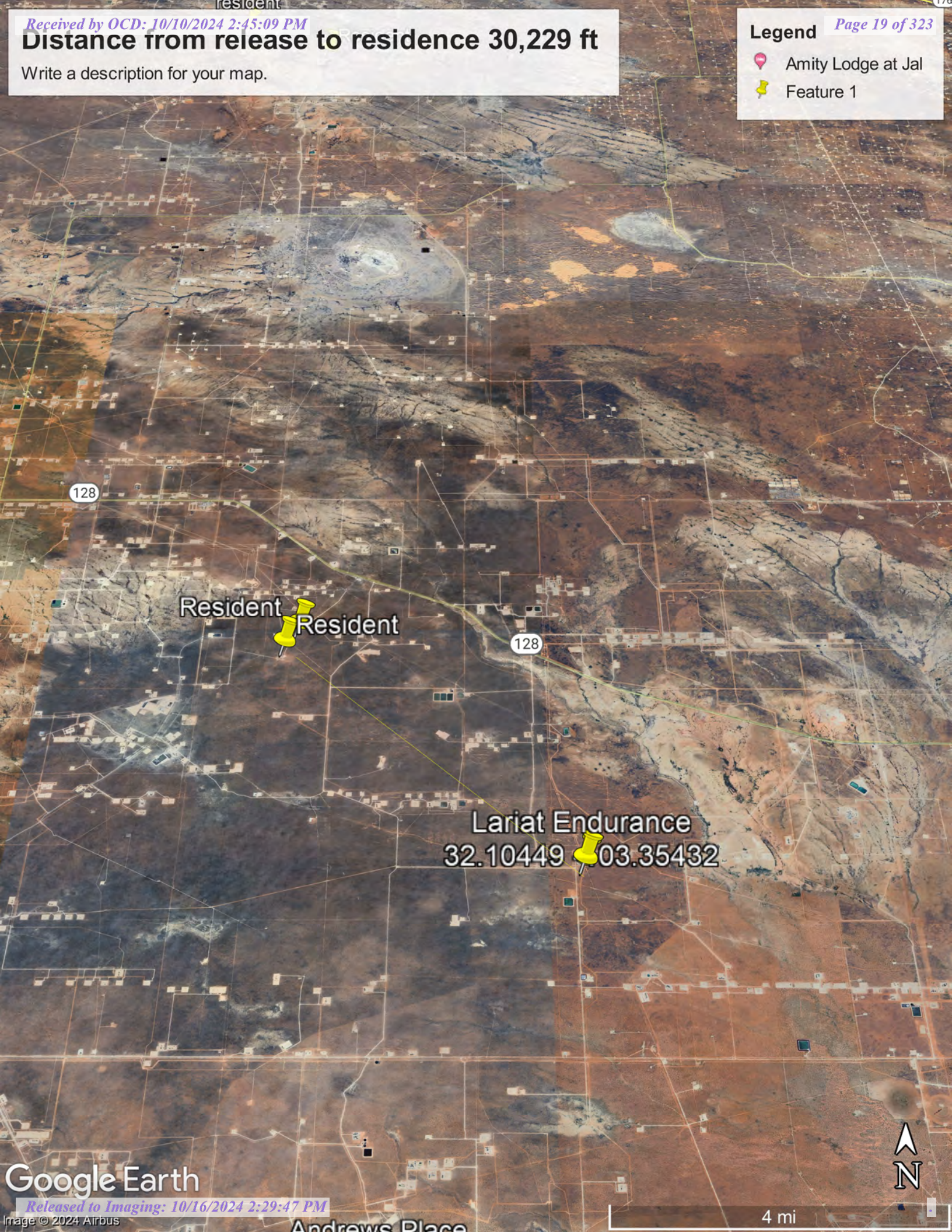
Distance from release to residence 30,229 ft

Write a description for your map.

Legend

 Amity Lodge at Jal

 Feature 1

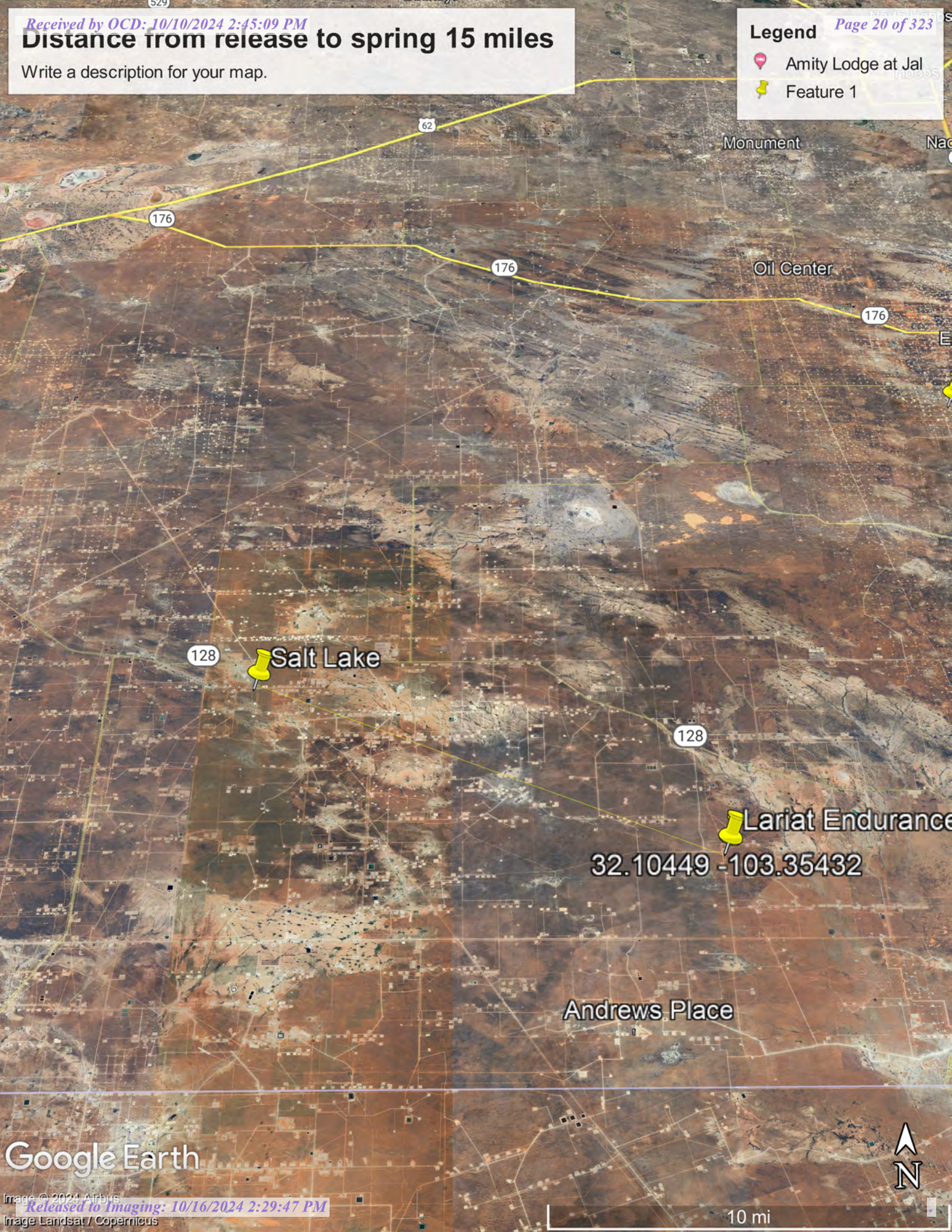


Distance from release to spring 15 miles

Write a description for your map.

Legend

- Amity Lodge at Jal
- Feature 1



128

Salt Lake

128

Lariat Endurance

32.10449 -103.35432

Andrews Place

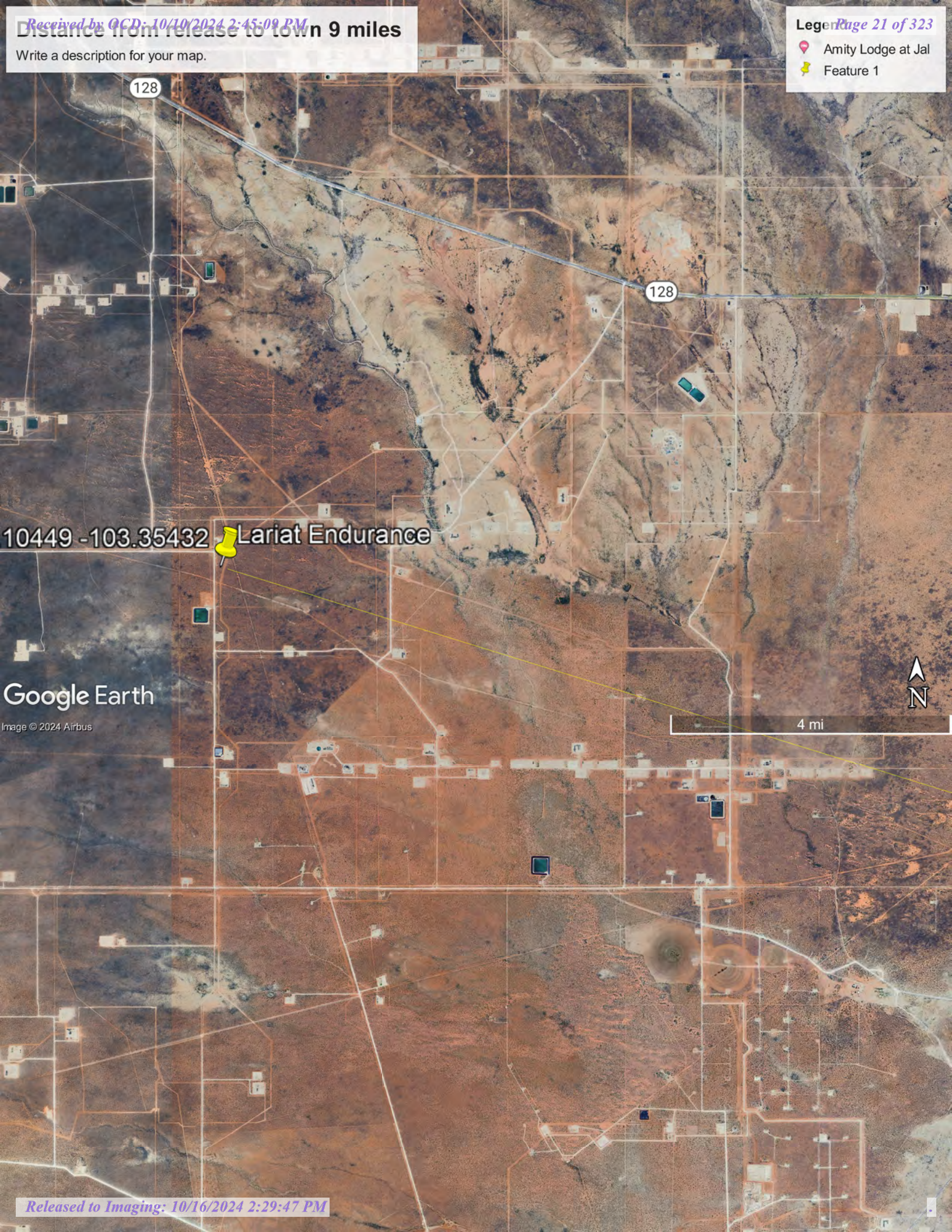
Google Earth

10 mi



Write a description for your map.

- Legend
- Amity Lodge at Jal
 - Feature 1



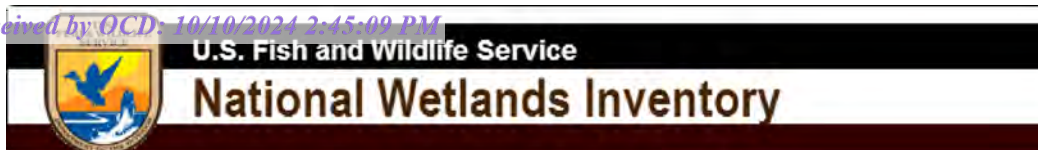
10449 -103.35432 Lariat Endurance

Google Earth

Image © 2024 Airbus



4 mi



Wetland Distance 14467



June 26, 2024

Wetlands

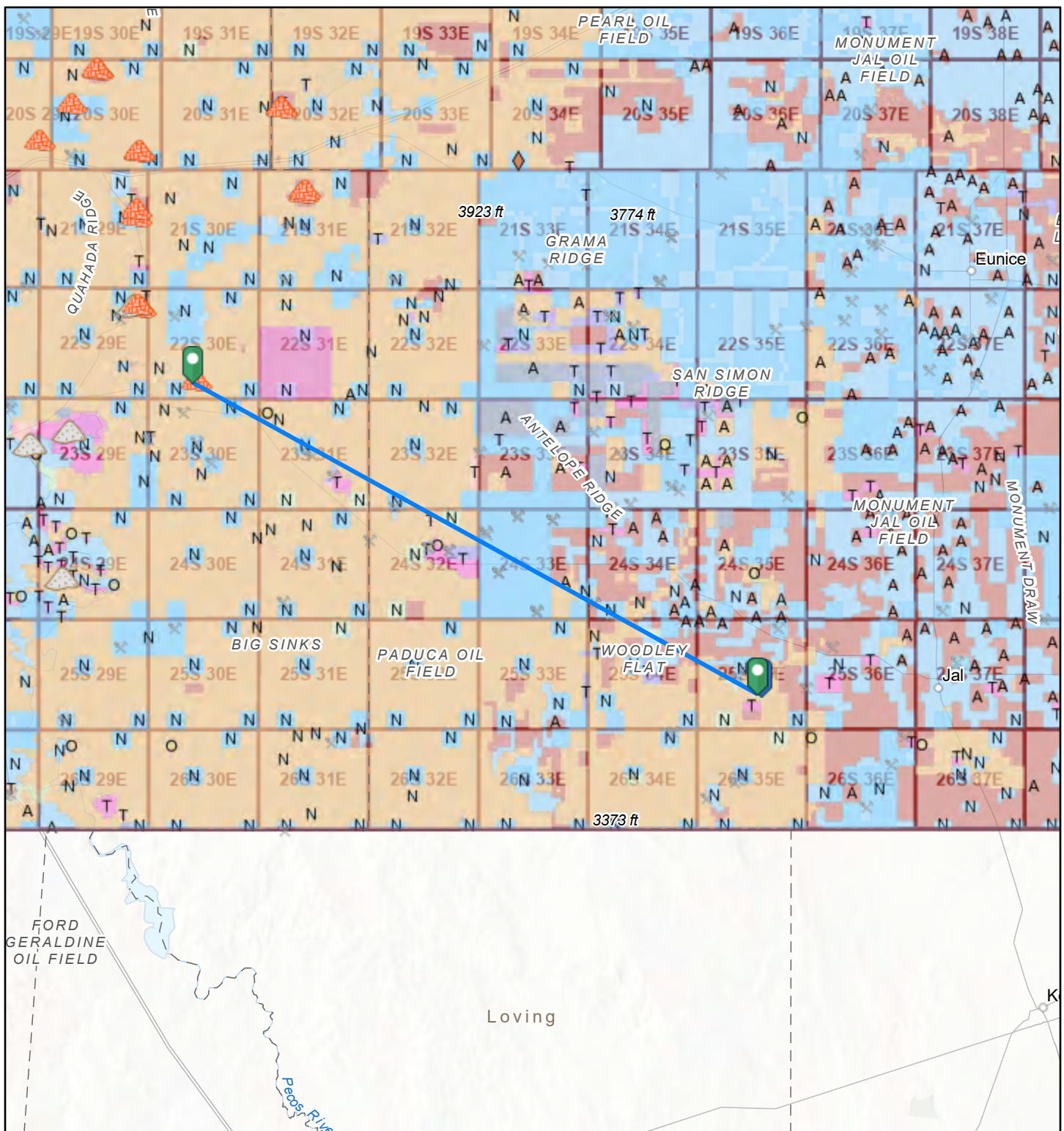
- Estuarine and Marine Deepwater
- Estuarine and Marine Wetland

- 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.

Distance to Sub surface Mine



6/26/2024, 9:51:15 AM

1:577,791

Registered Mines



Industrial Minerals (Other)



Aggregate, Stone etc.



Potash



Aggregate, Stone etc.



Salt



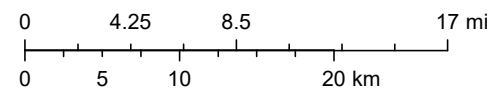
Aggregate, Stone etc.



PLSS Townships

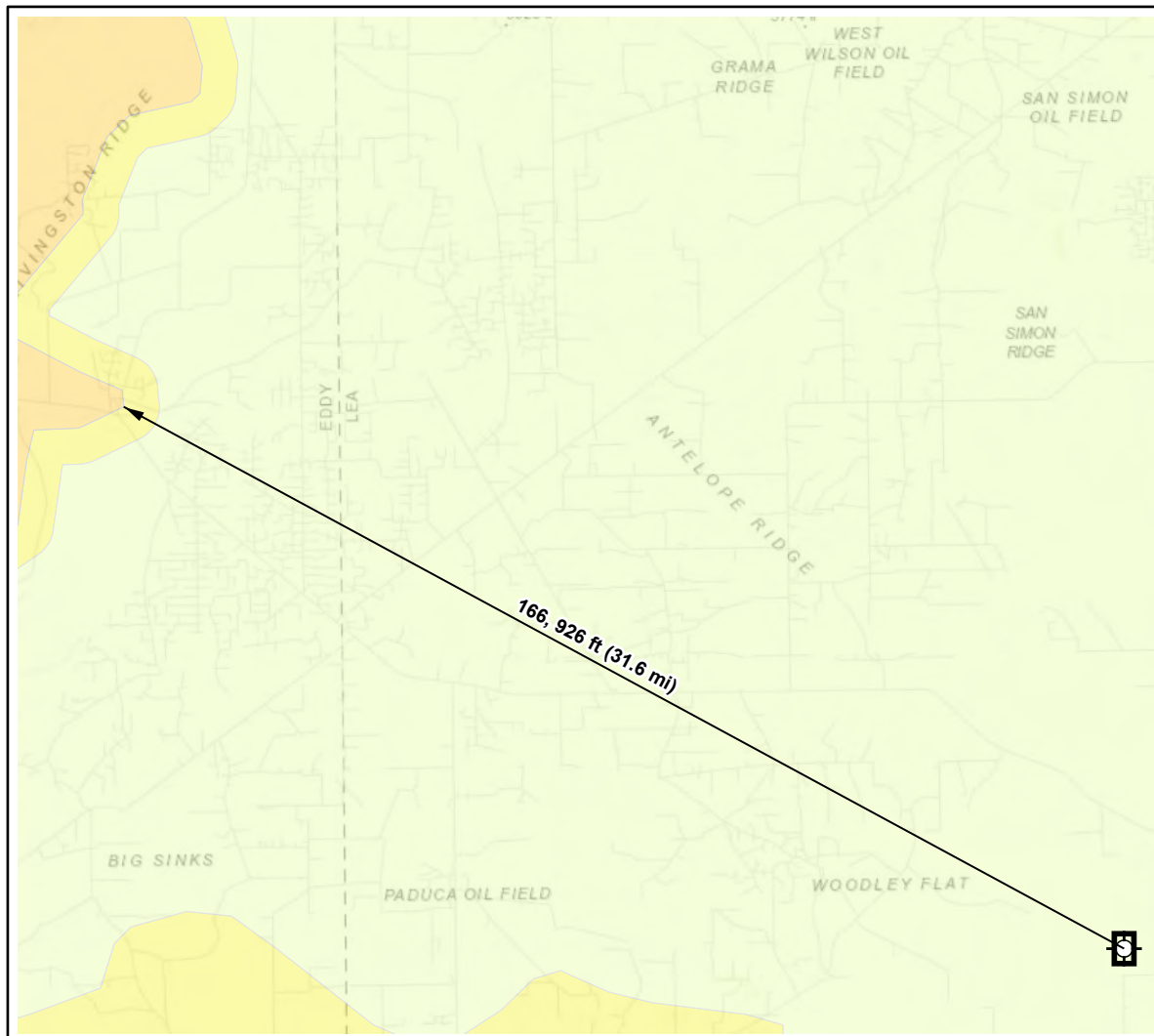


Aggregate, Stone etc.



Texas Parks & Wildlife, CONANP, Esri, TomTom, Garmin, SafeGraph, FAO, METI/NASA, USGS, EPA, NPS, USFWS, Esri, CGIAR, USGS, BLM

EMNRD MMD GIS Coordinator



Karst Potential

- Critical
- High
- Medium
- Low



Site Location



Site Buffer (1000 ft)

Overview Map

0 1 2 4 mi



Detail Map

0 150 300 600 ft



Map Center:
Lat/Long
32.10449°,-103.35432°

NAD 1983 UTM Zone 13N
Date: Jun 28/24



Karst Potential Map Endurance Lariat Water Line

Figure:
X



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, Esri 2022; Overview Map: Esri World Topographic. Karst potential data sources from Roswell Field Office, Bureau of Land Management, 2020 or United States Department of the Interior, Bureau of Land Management, (2018). Karst Potential.

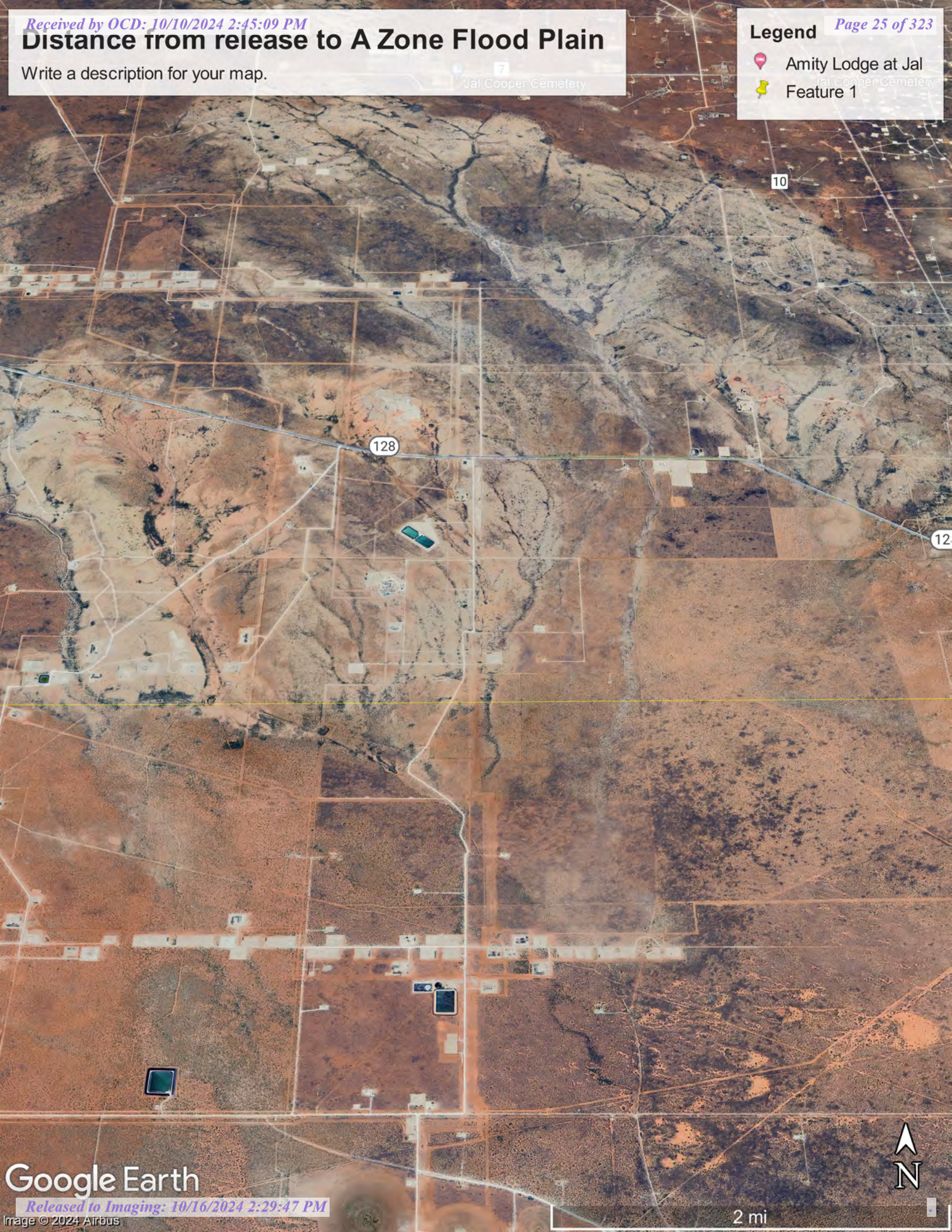
VERSATILITY. EXPERTISE.

Distance from release to A Zone Flood Plain

Write a description for your map.

Legend

- Amity Lodge at Jal
- Feature 1



National Flood Hazard Layer FIRMette



103°21'34"W 32°6'31"N



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

1:6,000

103°20'57"W 32°6'1"N

Released to Imaging: 10/16/2024 2:29:47 PM

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 Water Surface Elevation
		17.5 Cross Sections with 1% Annual Chance Water Surface Elevation
		Coastal Transect
		Base Flood Elevation Line (BFE)
		Limit of Study
		Jurisdiction Boundary
		Coastal Transect Baseline
MAP PANELS		Digital Data Available
		No Digital Data Available
		Unmapped



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 6/26/2024 at 12:25 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.



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 **Lea County, New Mexico**



June 26, 2024

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

Custom Soil Resource Report

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

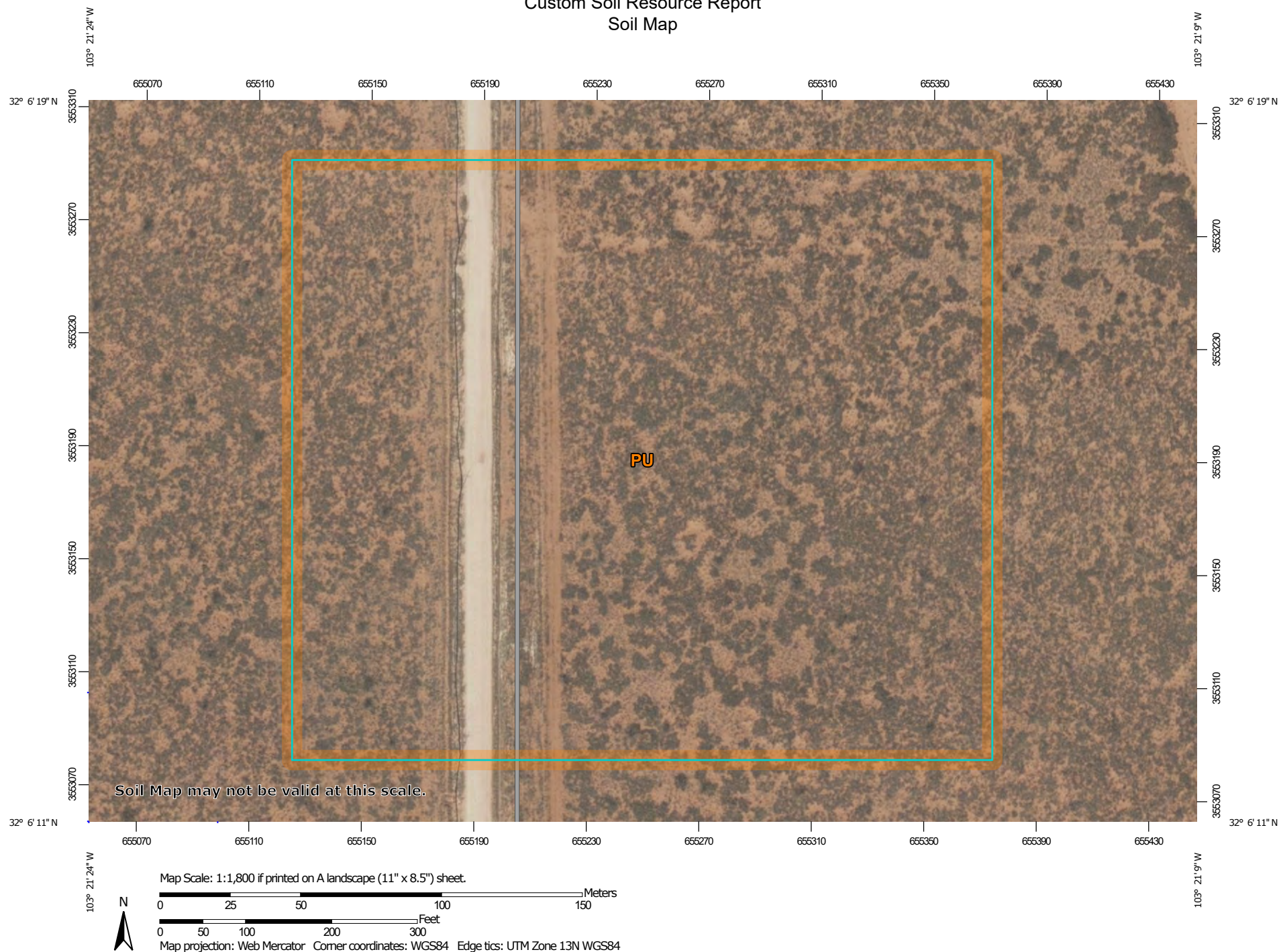
Custom Soil Resource Report

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



Custom Soil Resource Report

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: Lea County, New Mexico
Survey Area Data: Version 20, Sep 6, 2023

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.

Custom Soil Resource Report

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
PU	Pyote and Maljamar fine sands	13.1	100.0%
Totals for Area of Interest		13.1	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.

Custom Soil Resource Report

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.

Custom Soil Resource Report

Lea County, New Mexico

PU—Pyote and Maljamar fine sands

Map Unit Setting

National map unit symbol: dmqq
Elevation: 3,000 to 3,900 feet
Mean annual precipitation: 10 to 12 inches
Mean annual air temperature: 60 to 62 degrees F
Frost-free period: 190 to 205 days
Farmland classification: Not prime farmland

Map Unit Composition

Pyote and similar soils: 46 percent
Maljamar and similar soils: 44 percent
Minor components: 10 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Pyote

Setting

Landform: Plains
Landform position (three-dimensional): Rise
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Sandy eolian deposits derived from sedimentary rock

Typical profile

A - 0 to 30 inches: fine sand
Bt - 30 to 60 inches: fine sandy loam

Properties and qualities

Slope: 0 to 3 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Runoff class: Negligible
Capacity of the most limiting layer to transmit water (Ksat): High (2.00 to 6.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 5 percent
Gypsum, maximum content: 1 percent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Sodium adsorption ratio, maximum: 2.0
Available water supply, 0 to 60 inches: Low (about 5.1 inches)

Interpretive groups

Land capability classification (irrigated): 6e
Land capability classification (nonirrigated): 7s
Hydrologic Soil Group: A
Ecological site: R070BD003NM - Loamy Sand
Hydric soil rating: No

Custom Soil Resource Report

Description of Maljamar**Setting**

Landform: Plains

Landform position (three-dimensional): Rise

Down-slope shape: Linear

Across-slope shape: Linear

Parent material: Sandy eolian deposits derived from sedimentary rock

Typical profile

A - 0 to 24 inches: fine sand

Bt - 24 to 50 inches: sandy clay loam

Bkm - 50 to 60 inches: cemented material

Properties and qualities

Slope: 0 to 3 percent

Depth to restrictive feature: 40 to 60 inches to petrocalcic

Drainage class: Well drained

Runoff class: Very low

Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately low (0.00 to 0.06 in/hr)

Depth to water table: More than 80 inches

Frequency of flooding: None

Frequency of ponding: None

Calcium carbonate, maximum content: 5 percent

Gypsum, maximum content: 1 percent

Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)

Sodium adsorption ratio, maximum: 2.0

Available water supply, 0 to 60 inches: Low (about 5.6 inches)

Interpretive groups

Land capability classification (irrigated): 6e

Land capability classification (nonirrigated): 7e

Hydrologic Soil Group: B

Ecological site: R070BD003NM - Loamy Sand

Hydric soil rating: No

Minor Components**Kermit**

Percent of map unit: 10 percent

Ecological site: R070BC022NM - Sandhills

Hydric soil rating: No

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Custom Soil Resource Report

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Ecological site R070BD003NM

Loamy Sand

Accessed: 06/26/2024

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.

Associated sites

R070BD004NM	Sandy Sandy
R070BD005NM	Deep Sand Deep Sand

Table 1. Dominant plant species

Tree	Not specified
Shrub	Not specified
Herbaceous	Not specified

Physiographic features

This site is on uplands, plains, dunes, fan piedmonts and in inter dunal areas. The parent material consists of mixed alluvium and or eolian sands derived from sedimentary rock. Slope range on this site range from 0 to 9 percent with the average of 5 percent.

Low stabilized dunes may occur occasionally on this site. Elevations range from 2,800 to 5,000 feet.

Table 2. Representative physiographic features

Landforms	(1) Fan piedmont (2) Alluvial fan (3) Dune
Elevation	2,800–5,000 ft
Slope	0–9%
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 being late March or early April and the first killing frost being in later October or early November.

Temperature and rainfall both favor warm season perennial plant growth. In years of abundant spring moisture, annual forbs and cool season grasses can make up an important component of this site. Strong winds blow from the southwest 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 moderately deep or very deep. Surface textures are loamy fine sand, fine sandy loam, loamy very fine sand or gravelly sandy loam.

Subsurface is a loamy fine sand, coarse sandy loam, fine sandy loam or loam that averages less than 18 percent clay and less than 15 percent carbonates.

Substratum is a fine sandy loam or gravelly fine sandy loam with less than 15 percent gravel and with less than 40 percent calcium carbonate. Some layers high in lime or with caliche fragments may occur at depths of 20 to 30 inches.

These soils, if unprotected by plant cover and organic residue, become wind blown and low hummocks are formed.

Minimum and maximum values listed below represent the characteristic soils for this site.

Characteristic soils are:

Maljamar

Berino

Parjarito

Palomas

Wink

Pyote

Table 4. Representative soil features

Surface texture	(1) Fine sand (2) Fine sandy loam (3) Loamy fine sand
Family particle size	(1) Sandy
Drainage class	Well drained to somewhat excessively drained
Permeability class	Moderate to moderately rapid

Soil depth	40–72 in
Surface fragment cover ≤3"	0–10%
Surface fragment cover >3"	0%
Available water capacity (0–40in)	5–7 in
Calcium carbonate equivalent (0–40in)	3–40%
Electrical conductivity (0–40in)	2–4 mmhos/cm
Sodium adsorption ratio (0–40in)	0–2
Soil reaction (1:1 water) (0–40in)	6.6–8.4
Subsurface fragment volume ≤3" (Depth not specified)	4–12%
Subsurface fragment volume >3" (Depth not specified)	0%

Ecological dynamics

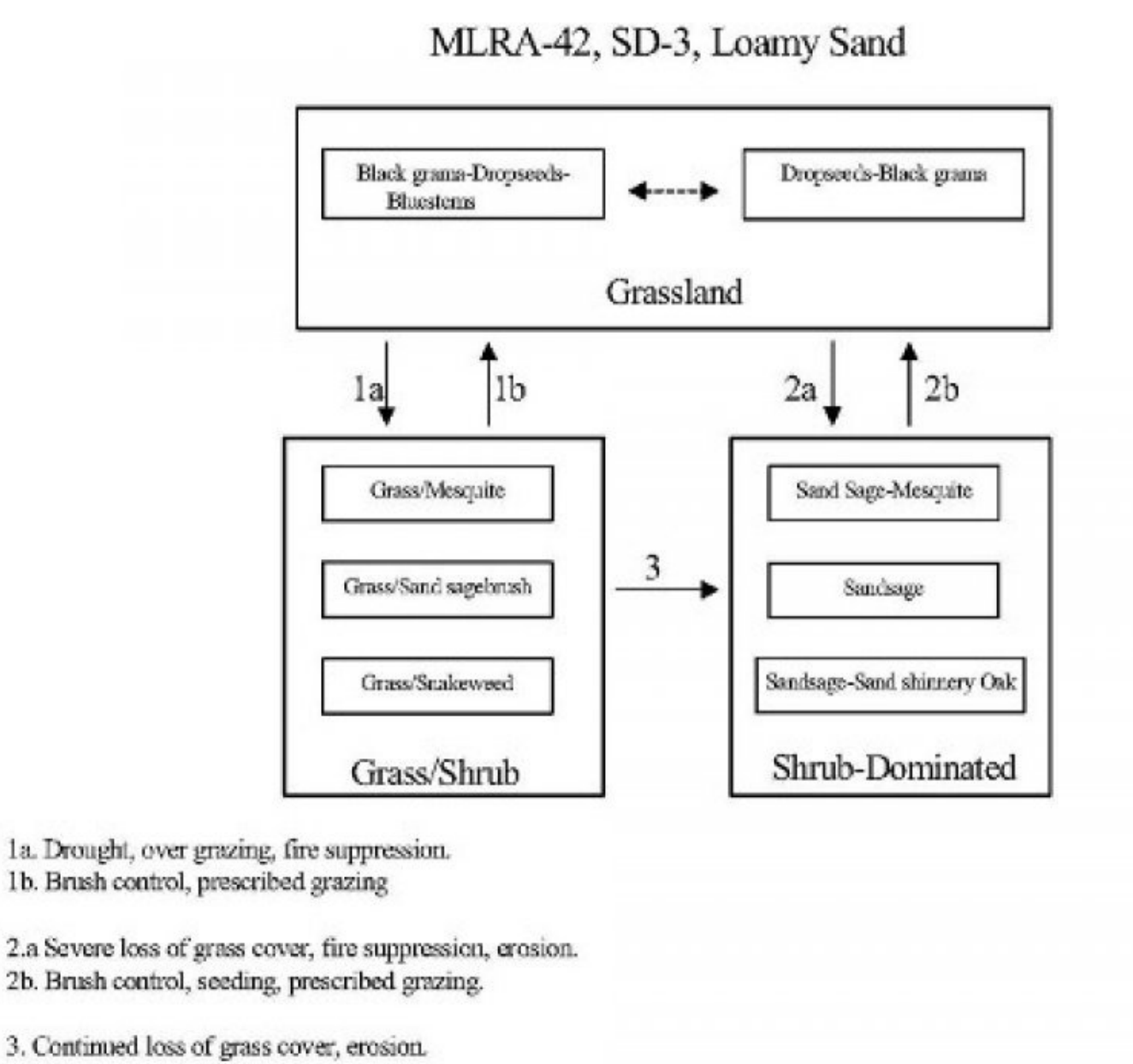
Overview

The Loamy Sand site intergrades with the Deep Sand and Sandy sites (SD-3). These sites can be differentiated by surface soil texture and depth to a textural change. Loamy Sand and Deep Sand sites have coarse textured (sands and loamy sand) surface soils while Sandy sites have moderately coarse textured (sandy loam and fine sandy loam) surfaces. Although Loamy Sand and Deep Sand sites have similar surface textures, the depth to a textural change is different—Loamy Sand sub-surface textures typically increase in clay at approximately 20 to 30 inches, and Deep Sand sites not until around 40 inches.

The historic plant community of Loamy Sand sites is dominated by black grama (*Bouteloua eriopoda*), dropseeds (*Sporobolus flexuosus*, *S. contractus*, *S. cryptandrus*), and bluestems (*Schizachyrium scoparium* and *Andropogon hallii*), with scattered shinnery oak (*Quercus havardii*) and sand sage (*Artemisia filifolia*). Perennial and annual forb abundance and distribution are dependent on precipitation. Litter and to a lesser extent, bare ground, are a significant proportion of ground cover while grasses compose the remainder. Decreases in black grama indicate a transition to either a grass/shrub or shrub-dominated state. The grass/shrub state is composed of grasses/honey mesquite (*Prosopis glandulosa*), grasses/broom snakeweed (*Gutierrezia sarothrae*), or grasses/sand sage. The shrub-dominated state occurs after a severe loss of grass cover and a prevalence of sand sage with secondary shinnery oak and mesquite. Heavy grazing intensity and/or drought are influential drivers in decreasing black grama and bluestems and subsequently increasing shrub cover, erosion, and bare patches. Historical fire suppression also encourages shrub pervasiveness and a competitive advantage over grass species (McPherson 1995). Brush and grazing management, however, may reverse grass/shrub and shrub-dominated states toward the grassland-dominated historic plant community.

State and transition model

Plant Communities and Transitional Pathways (diagram):



State 1
Historic Climax Plant Community

Community 1.1
Historic Climax Plant Community

Grassland: The historic plant community is a uniformly distributed grassland dominated by black grama, dropseeds, and bluestems. Sand sage and shinnery oak are evenly dispersed throughout the grassland due to the coarse soil

surface texture. Perennial and annual forbs are common but their abundance and distribution are reflective of precipitation. Bluestems initially, followed by black grama, decrease with drought and heavy grazing intensity. Historical fire frequency is unknown but likely occurred enough to remove small shrubs to the competitive advantage of grass species. Fire suppression, drought conditions, and excessive grazing drive most grass species out of competition with shrub species. Diagnosis: Grassland dominated by black grama, dropseeds, and bluestems. Shrubs, such as sand sage, shinnery oak, and mesquite are dispersed throughout the grassland. Forbs are present and populations fluctuate with precipitation variability.

Table 5. Annual production by plant type

Plant Type	Low (Lb/Acre)	Representative Value (Lb/Acre)	High (Lb/Acre)
Grass/Grasslike	442	833	1224
Forb	110	208	306
Shrub/Vine	98	184	270
Total	650	1225	1800

Table 6. Ground cover

Tree foliar cover	0%
Shrub/vine/liana foliar cover	0%
Grass/grasslike foliar cover	28%
Forb foliar cover	0%
Non-vascular plants	0%
Biological crusts	0%
Litter	50%
Surface fragments >0.25" and <=3"	0%
Surface fragments >3"	0%
Bedrock	0%
Water	0%
Bare ground	22%

Figure 5. Plant community growth curve (percent production by month). NM2803, R042XC003NM-Loamy Sand-HCPC. SD-3 Loamy 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
Grass/Shrub

Community 2.1
Grass/Shrub



Grass/Shrub State: The grass/shrub state is dominated by communities of grasses/mesquite, grasses/snakeweed, or grasses/sand sage. Decreases in black grama and bluestem species lead to an increase in bare patches and mesquite which further competes with grass species. An increase of dropseeds and threeawns occurs. Grass distribution becomes more patchy with an absence or severe decrease in black grama and bluestems. Mesquite provides nitrogen and soil organic matter to co-dominant grasses (Ansley and Jacoby 1998, Ansley et al. 1998). Mesquite mortality when exposed to fire is low due to aggressive resprouting abilities. Herbicide application combined with subsequent prescribed fire may be more effective in mesquite reduction (Britton and Wright 1971). **Diagnosis:** This state is dominated by an increased abundance of communities including grass/mesquite, grass/snakeweed, or grass/sand sage. Dropseeds and threeawns have a patchy distribution. **Transition to Grass/Shrub State (1a):** The historic plant community begins to shift toward the grass/shrub state as drivers such as drought, 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 a decrease in black grama with a subsequent increase of dropseeds, threeawns, mesquite, and snakeweed. Snakeweed has been documented to outcompete black grama especially under conditions of fire suppression and drought (McDaniel et al. 1984). **Key indicators of approach to transition:** • Loss of black grama cover • Surface soil erosion • Bare patch expansion • Increased dropseed/threeawn and mesquite, snakeweed, or sand sage abundances **Transition to Historic Plant Community (1b):** Brush and grazing management may restore the grassland component and reverse shrub or grass/shrub dominated states back toward the historic plant community.

State 3 Shrub Dominated

Community 3.1 Shrub Dominated

Shrub-Dominated State: The shrub-dominated state results from a severe loss of grass cover. This state's primary species is sand sage. Shinnery oak and mesquite also occur; however, grass cover is limited to intershrub distribution. Sand sage stabilizes light sandy soils from wind erosion, which enhances protected grass/forb cover (Davis and Bonham 1979). However, shinnery oak also responds to the sandy soils with dense stands due to an

aggressive rhizome system. Shinnery oak's extensive root system promotes competitive exclusion of grasses and forbs. Sand sage, shinnery oak, and mesquite can be controlled with herbicide (Herbel et al. 1979, Pettit 1986). Transition to Shrub-Dominated (2a): Severe loss of grass species with increased erosion and fire suppression will result in a transition to a shrub-dominated state with sand sage, Shin oak, and honey mesquite directly from the grassland-dominated state. Key indicators of approach to transition: • Severe loss of grass species cover • Surface soil erosion • Bare patch expansion • Increased sand sage, shinnery oak, and mesquite abundance Transition to Historic Plant Community (2b): Brush and grazing management may restore the grassland component and reverse shrub or grass/shrub dominated states back toward the historic plant community. In addition, seeding with native grass species will augment the transition to a grassland-dominated state. Transition to Shrub-Dominated (3): If the grass/shrub site continues to lose grass cover with soil erosion, the site will transition to a shrub-dominated state with sand sage, shinnery oak, and honey mesquite. Key indicators of approach to transition: • Continual loss of dropseeds/threawns cover • Surface soil erosion • Bare patch expansion • Increased sand sage, shinnery oak, and mesquite/dropseed/threawn and mesquite/snakeweed abundance

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			61–123	
	little bluestem	SCSC	<i>Schizachyrium scoparium</i>	61–123	–
2	Warm Season			37–61	
	sand bluestem	ANHA	<i>Andropogon hallii</i>	37–61	–
3	Warm Season			37–61	
	cane bluestem	BOBA3	<i>Bothriochloa barbinodis</i>	37–61	–
	silver bluestem	BOSA	<i>Bothriochloa saccharoides</i>	37–61	–
4	Warm Season			123–184	
	black grama	BOER4	<i>Bouteloua eriopoda</i>	123–184	–
	bush muhly	MUPO2	<i>Muhlenbergia porteri</i>	123–184	–
5	Warm Season			123–184	
	thin paspalum	PASE5	<i>Paspalum setaceum</i>	123–184	–
	plains bristlegrass	SEVU2	<i>Setaria vulpiseta</i>	123–184	–
	fringed signalgrass	URCI	<i>Urochloa ciliatissima</i>	123–184	–
6	Warm Season			123–184	
	spike dropseed	SPCO4	<i>Sporobolus contractus</i>	123–184	–
	sand dropseed	SPCR	<i>Sporobolus cryptandrus</i>	123–184	–
	mesa dropseed	SPFL2	<i>Sporobolus flexuosus</i>	123–184	–
7	Warm Season			61–123	
	hooded windmill grass	CHCU2	<i>Chloris cucullata</i>	61–123	–
	Arizona cottontop	DICA8	<i>Digitaria californica</i>	61–123	–
9	Other Perennial Grasses			37–61	
	Grass, perennial	2GP	<i>Grass, perennial</i>	37–61	–
Shrub/Vine					
8	Warm Season			37–61	
	New Mexico feathergrass	HENE5	<i>Hesperostipa neomexicana</i>	37–61	–
	giant dropseed	SPGI	<i>Sporobolus giganteus</i>	37–61	–
10	Shrub			61–123	

	sand sagebrush	ARFI2	<i>Artemisia filifolia</i>	61–123	–
	Havard oak	QUHA3	<i>Quercus havardii</i>	61–123	–
11	Shrub			34–61	
	fourwing saltbush	ATCA2	<i>Atriplex canescens</i>	37–61	–
	featherplume	DAFO	<i>Dalea formosa</i>	37–61	–
12	Shrub			37–61	
	jointfir	EPHED	<i>Ephedra</i>	37–61	–
	littleleaf ratany	KRER	<i>Krameria erecta</i>	37–61	–
13	Other Shrubs			37–61	
	Shrub (>.5m)	2SHRUB	<i>Shrub (>.5m)</i>	37–61	–
Forb					
14	Forb			61–123	
	leatherweed	CRPOP	<i>Croton pottsii</i> var. <i>pottsii</i>	61–123	–
	Indian blanket	GAPU	<i>Gaillardia pulchella</i>	61–123	–
	globemallow	SPHAE	<i>Sphaeralcea</i>	61–123	–
15	Forb			12–37	
	woolly groundsel	PACA15	<i>Packera cana</i>	12–37	–
16	Forb			61–123	
	touristplant	DIWI2	<i>Dimorphocarpa wislizeni</i>	61–123	–
	woolly plantain	PLPA2	<i>Plantago patagonica</i>	61–123	–
17	Other Forbs			37–61	
	Forb (herbaceous, not grass nor grass-like)	2FORB	<i>Forb (herbaceous, not grass nor grass-like)</i>	37–61	–

Animal community

This Ecological Site provides habitat which supports a resident animal community that is characterized by pronghorn antelope, desert cottontail, spotted ground squirrel, black-tailed prairie dog, yellow faced pocket gopher, Ord's kangaroo rat, northern grasshopper mouse, southern plains woodrat, badger, roadrunner, meadowlark, burrowing owl, white necked raven, lesser prairie chicken, morning dove, scaled quail, Harris hawk, side blotched lizard, marbled whiptail, Texas horned lizard, western diamondback rattlesnake, dusty hognose snake and ornate box turtle.

Where mesquite has invaded, most resident birds and scissor-tailed flycatcher, morning dove and Swainson's hawk, nest. Vesper and grasshopper sparrows utilize the site during migration.

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

Berino B

Kinco A

Maljamar B

Pajarito B

Palomas B

Wink B

Pyote A

Recreational uses

This site offers recreation potential for hiking, borseback riding, nature observation, photography and hunting. During years of abundant spring moisture, this site displays a colorful array of wildflowers during May and June.

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 at any time of year. In cases where this site has been invaded by brush species it is especially suited for goats. Mismanagement of this site will cause a decrease in species such as the bluestems, black grama, bush muhly, plains bristlegrass, New Mexico feathergrass, Arizona cottontop and fourwing saltbush. A corresponding increase in the dropseeds, windmill grass, fall witchgrass, silver bluestem, sand sagebrush, shinery oak and ephedra will occur. This will also cause an increase in bare ground which will increase soil erodibility. This site will respond well to a system of management that rotates the season of use.

Other information

Guide to Suggested Initial Stocking Rate Acres per Animal Unit Month

Similarity Index Ac/AUM

100 - 76 2.3 – 3.5

75 – 51 3.0 – 4.5

50 – 26 4.6 – 9.0

25 – 0 9.1 +

Inventory data 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.

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Contributors

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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:

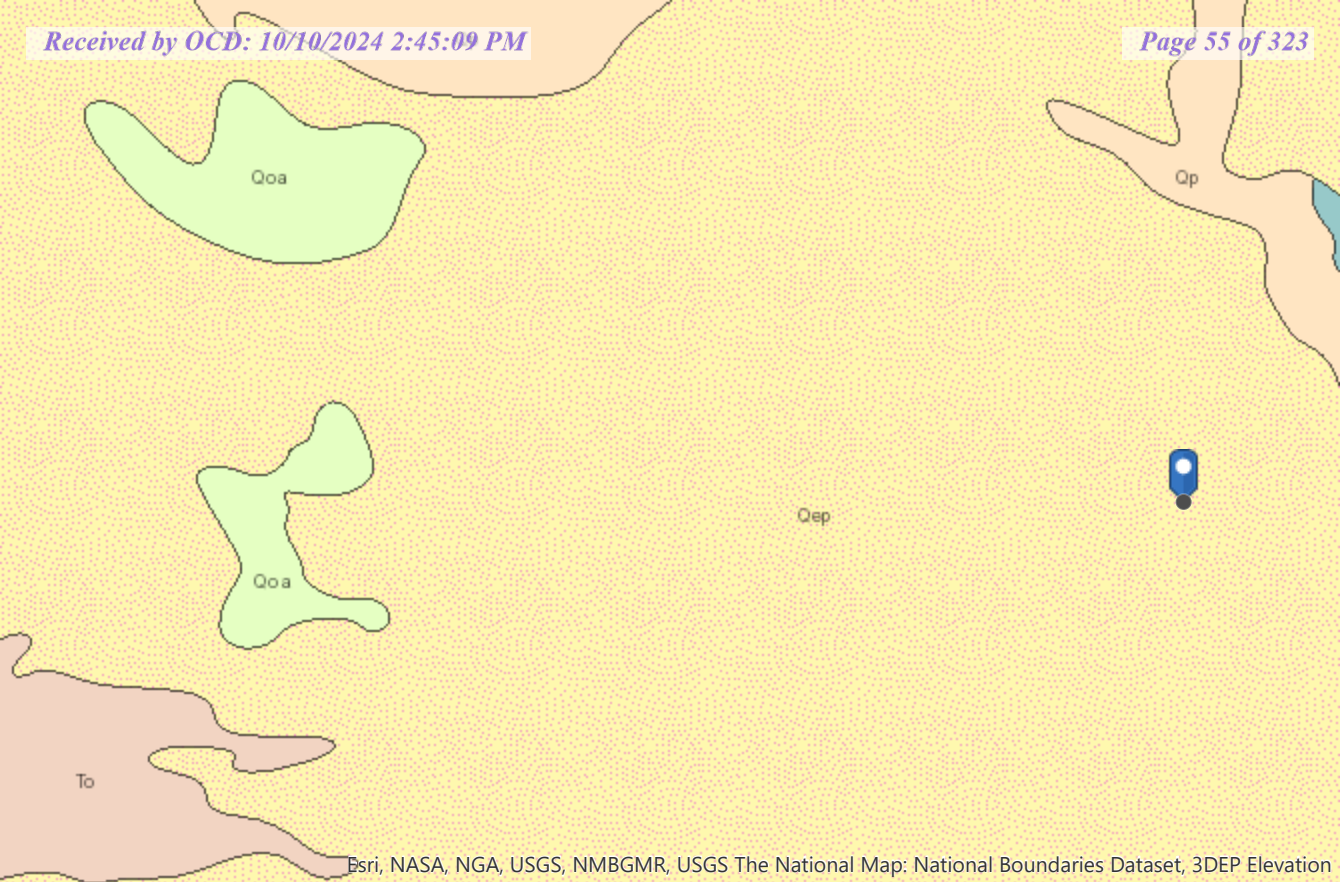
4. Bare ground from Ecological Site Description or other studies (rock, litter, lichen, moss, plant canopy are not bare ground):

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:



Esri, NASA, NGA, USGS, NMBGMR, USGS The National Map: National Boundaries Dataset, 3DEP Elevation Program, Geographic Names Information System, National Hydrography Dataset, National Land Cover Database, National Structures Dataset, and National Transportation Dataset; USGS Global Ecosystems; U.S. Census Bureau TIGER/Line data; USGS Rept data; Natural Earth Data; U.S. Department of State HIU; NOAA National Centers for Environmental Information

Attachment 4





Daily Site Visit Report



Client	Solaris Water Midstream	Inspection Date	6/27/2024
Site Location Name	Endurance Lariat Water Line	API #	
Client Contact Name	Fernando Carrasco	Project Owner	
Client Contact Phone #	432-924-9416	Project Manager	
Project Reference #			
Unique Project ID			

Summary of Times

Arrived at Site 6/27/2024 8:30 AM

Departed Site

Field Notes

9:02 On site safety meeting planning daily walk through

9:02 Began delineation

17:55 Samples Bh24-01 through 8 were collected at 0, 24 ft bgs and were all field screened for Cl via titration spot checked BH24-03, 5, 6, 7 to check for TPH

17:55 All samples were below criteria of Cl and BH24-03 at surface was the only sample above criteria for TPH and it was excessive

17:55 All samples were jarred on site.

Next Steps & Recommendations

1

Daily Site Visit Report



Site Photos

Viewing Direction: North



BH24-01

Viewing Direction: West



BH24-02

Viewing Direction: South



BH24-03

Viewing Direction: West



BH24-04

Daily Site Visit Report



Viewing Direction: South



BH24-05

Viewing Direction: South



BH24-06

Viewing Direction: Southwest



BH24-07

Viewing Direction: West



BH24-08

Daily Site Visit Report



Daily Site Visit Signature

Inspector: Wyatt Wadleigh

Signature:

Attachment 5



Environment Testing

- 1
- 2
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- 5
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- 8
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- 11

ANALYTICAL REPORT

PREPARED FOR

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

Generated 7/9/2024 3:28:46 PM

JOB DESCRIPTION

Endurance Lariat Water

JOB NUMBER

885-7160-1

Eurofins Albuquerque
4901 Hawkins NE
Albuquerque NM 87109



Eurofins Albuquerque

Job Notes

The test results in this report relate only to the samples as received by the laboratory and will meet all requirements of the methodology, with any exceptions noted. This report shall not be reproduced except in full, without the express written approval of the laboratory. All questions should be directed to the Eurofins Environment Testing South Central, LLC Project Manager.

Authorization



Authorized for release by
Andy Freeman, Business Unit Manager
andy.freeman@et.eurofinsus.com
(505)345-3975

Generated
7/9/2024 3:28:46 PM

Client: Vertex
Project/Site: Endurance Lariat Water

Laboratory Job ID: 885-7160-1

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Definitions/Glossary

Client: Vertex
Project/Site: Endurance Lariat Water

Job ID: 885-7160-1

Qualifiers

GC VOA

Qualifier	Qualifier Description
S1+	Surrogate recovery exceeds control limits, high biased.

GC Semi VOA

Qualifier	Qualifier Description
D	Surrogate or matrix spike recoveries were not obtained because the extract was diluted for analysis; also compounds analyzed at a dilution may be flagged with a D.
S1-	Surrogate recovery exceeds control limits, low biased.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	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: Endurance Lariat Water

Job ID: 885-7160-1

Job ID: 885-7160-1

Eurofins Albuquerque

Job Narrative 885-7160-1

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 6/29/2024 6:15 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 2.0°C.

Gasoline Range Organics

Method 8015D_GRO: Surrogate recovery for the following sample was outside control limits: BH24-03 0ft (885-7160-7). 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.

GC VOA

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

Diesel Range Organics

Method 8015D_DRO: The following sample required a dilution due to the nature of the sample matrix: BH24-03 0ft (885-7160-7). Because of this dilution, the surrogate spike concentration in the sample was reduced to a level where the recovery calculation does not provide useful information.

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.

Eurofins Albuquerque

Client Sample Results

Client: Vertex
Project/Site: Endurance Lariat Water

Job ID: 885-7160-1

Client Sample ID: BH24-01 0ft

Lab Sample ID: 885-7160-1

Date Collected: 06/27/24 09:00

Matrix: Solid

Date Received: 06/29/24 06:15

Method: SW846 8015M/D - Gasoline Range Organics (GRO) (GC)									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Gasoline Range Organics [C6 - C10]	ND		5.0	mg/Kg		07/02/24 09:26	07/05/24 12:43		1
Method: SW846 8015M/D - Gasoline Range Organics (GRO) (GC)									
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac	
4-Bromofluorobenzene (Surr)	92		35 - 166			07/02/24 09:26	07/05/24 12:43		1
Method: SW846 8021B - Volatile Organic Compounds (GC)									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Benzene	ND		0.025	mg/Kg		07/02/24 09:26	07/05/24 12:43		1
Ethylbenzene	ND		0.050	mg/Kg		07/02/24 09:26	07/05/24 12:43		1
Toluene	ND		0.050	mg/Kg		07/02/24 09:26	07/05/24 12:43		1
Xylenes, Total	ND		0.10	mg/Kg		07/02/24 09:26	07/05/24 12:43		1
Method: SW846 8021B - Volatile Organic Compounds (GC)									
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac	
4-Bromofluorobenzene (Surr)	88		48 - 145			07/02/24 09:26	07/05/24 12:43		1
Method: SW846 8015M/D - Diesel Range Organics (DRO) (GC)									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Diesel Range Organics [C10-C28]	ND		10	mg/Kg		07/02/24 11:43	07/02/24 16:44		1
Motor Oil Range Organics [C28-C40]	ND		50	mg/Kg		07/02/24 11:43	07/02/24 16:44		1
Method: SW846 8015M/D - Diesel Range Organics (DRO) (GC)									
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac	
Di-n-octyl phthalate (Surr)	83		62 - 134			07/02/24 11:43	07/02/24 16:44		1
Method: EPA 300.0 - Anions, Ion Chromatography									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Chloride	ND		60	mg/Kg		07/02/24 12:18	07/02/24 18:24		20

Client Sample Results

Client: Vertex
Project/Site: Endurance Lariat Water

Job ID: 885-7160-1

Client Sample ID: BH24-01 2ft

Lab Sample ID: 885-7160-2

Date Collected: 06/27/24 09:15

Matrix: Solid

Date Received: 06/29/24 06:15

Method: SW846 8015M/D - Gasoline Range Organics (GRO) (GC)									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Gasoline Range Organics [C6 - C10]	ND		5.0	mg/Kg		07/02/24 09:26	07/05/24 13:53		1
Method: SW846 8015M/D - Gasoline Range Organics (GRO) (GC)									
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac	
4-Bromofluorobenzene (Surr)	92		35 - 166			07/02/24 09:26	07/05/24 13:53		1
Method: SW846 8021B - Volatile Organic Compounds (GC)									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Benzene	ND		0.025	mg/Kg		07/02/24 09:26	07/05/24 13:53		1
Ethylbenzene	ND		0.050	mg/Kg		07/02/24 09:26	07/05/24 13:53		1
Toluene	ND		0.050	mg/Kg		07/02/24 09:26	07/05/24 13:53		1
Xylenes, Total	ND		0.10	mg/Kg		07/02/24 09:26	07/05/24 13:53		1
Method: SW846 8021B - Volatile Organic Compounds (GC)									
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac	
4-Bromofluorobenzene (Surr)	86		48 - 145			07/02/24 09:26	07/05/24 13:53		1
Method: SW846 8015M/D - Diesel Range Organics (DRO) (GC)									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Diesel Range Organics [C10-C28]	ND		9.5	mg/Kg		07/02/24 11:43	07/02/24 16:55		1
Motor Oil Range Organics [C28-C40]	ND		47	mg/Kg		07/02/24 11:43	07/02/24 16:55		1
Method: SW846 8015M/D - Diesel Range Organics (DRO) (GC)									
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac	
Di-n-octyl phthalate (Surr)	86		62 - 134			07/02/24 11:43	07/02/24 16:55		1
Method: EPA 300.0 - Anions, Ion Chromatography									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Chloride	ND		60	mg/Kg		07/02/24 12:18	07/02/24 19:03		20

Client Sample Results

Client: Vertex
Project/Site: Endurance Lariat Water

Job ID: 885-7160-1

Client Sample ID: BH24-01 4ft Lab Sample ID: 885-7160-3
Date Collected: 06/27/24 09:30 Matrix: Solid
Date Received: 06/29/24 06:15

Method: SW846 8015M/D - Gasoline Range Organics (GRO) (GC)									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Gasoline Range Organics [C6 - C10]	ND		5.0	mg/Kg		07/02/24 09:26	07/05/24 15:03	1	

Method: SW846 8015M/D - Gasoline Range Organics (GRO) (GC)									
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac	
4-Bromofluorobenzene (Surr)	95		35 - 166			07/02/24 09:26	07/05/24 15:03	1	

Method: SW846 8021B - Volatile Organic Compounds (GC)									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Benzene	ND		0.025	mg/Kg		07/02/24 09:26	07/05/24 15:03	1	
Ethylbenzene	ND		0.050	mg/Kg		07/02/24 09:26	07/05/24 15:03	1	
Toluene	ND		0.050	mg/Kg		07/02/24 09:26	07/05/24 15:03	1	
Xylenes, Total	ND		0.10	mg/Kg		07/02/24 09:26	07/05/24 15:03	1	

Method: SW846 8021B - Volatile Organic Compounds (GC)									
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac	
4-Bromofluorobenzene (Surr)	89		48 - 145			07/02/24 09:26	07/05/24 15:03	1	

Method: SW846 8015M/D - Diesel Range Organics (DRO) (GC)									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Diesel Range Organics [C10-C28]	ND		9.4	mg/Kg		07/02/24 11:43	07/02/24 17:06	1	
Motor Oil Range Organics [C28-C40]	ND		47	mg/Kg		07/02/24 11:43	07/02/24 17:06	1	

Method: SW846 8015M/D - Diesel Range Organics (DRO) (GC)									
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac	
Di-n-octyl phthalate (Surr)	90		62 - 134			07/02/24 11:43	07/02/24 17:06	1	

Method: EPA 300.0 - Anions, Ion Chromatography									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Chloride	ND		60	mg/Kg		07/02/24 12:18	07/02/24 19:15	20	

Client Sample Results

Client: Vertex
Project/Site: Endurance Lariat Water

Job ID: 885-7160-1

Client Sample ID: BH24-02 0ft Lab Sample ID: 885-7160-4
Date Collected: 06/27/24 09:45 Matrix: Solid
Date Received: 06/29/24 06:15

Method: SW846 8015M/D - Gasoline Range Organics (GRO) (GC)									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Gasoline Range Organics [C6 - C10]	ND		5.0	mg/Kg		07/02/24 09:26	07/05/24 15:27		1
Method: SW846 8015M/D - Gasoline Range Organics (GRO) (GC)									
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac	
4-Bromofluorobenzene (Surr)	94		35 - 166			07/02/24 09:26	07/05/24 15:27		1
Method: SW846 8021B - Volatile Organic Compounds (GC)									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Benzene	ND		0.025	mg/Kg		07/02/24 09:26	07/05/24 15:27		1
Ethylbenzene	ND		0.050	mg/Kg		07/02/24 09:26	07/05/24 15:27		1
Toluene	ND		0.050	mg/Kg		07/02/24 09:26	07/05/24 15:27		1
Xylenes, Total	ND		0.10	mg/Kg		07/02/24 09:26	07/05/24 15:27		1
Method: SW846 8021B - Volatile Organic Compounds (GC)									
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac	
4-Bromofluorobenzene (Surr)	88		48 - 145			07/02/24 09:26	07/05/24 15:27		1
Method: SW846 8015M/D - Diesel Range Organics (DRO) (GC)									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Diesel Range Organics [C10-C28]	ND		9.5	mg/Kg		07/02/24 11:43	07/02/24 17:17		1
Motor Oil Range Organics [C28-C40]	ND		48	mg/Kg		07/02/24 11:43	07/02/24 17:17		1
Method: SW846 8015M/D - Diesel Range Organics (DRO) (GC)									
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac	
Di-n-octyl phthalate (Surr)	87		62 - 134			07/02/24 11:43	07/02/24 17:17		1
Method: EPA 300.0 - Anions, Ion Chromatography									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Chloride	ND		60	mg/Kg		07/02/24 12:18	07/02/24 19:28		20

Client Sample Results

Client: Vertex
Project/Site: Endurance Lariat Water

Job ID: 885-7160-1

Client Sample ID: BH24-02 2ft Lab Sample ID: 885-7160-5
Date Collected: 06/27/24 10:00 Matrix: Solid
Date Received: 06/29/24 06:15

Method: SW846 8015M/D - Gasoline Range Organics (GRO) (GC)									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Gasoline Range Organics [C6 - C10]	ND		4.9	mg/Kg		07/02/24 09:26	07/05/24 15:50	1	
Method: SW846 8015M/D - Gasoline Range Organics (GRO) (GC)									
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac	
4-Bromofluorobenzene (Surr)	93		35 - 166			07/02/24 09:26	07/05/24 15:50	1	
Method: SW846 8021B - Volatile Organic Compounds (GC)									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Benzene	ND		0.025	mg/Kg		07/02/24 09:26	07/05/24 15:50	1	
Ethylbenzene	ND		0.049	mg/Kg		07/02/24 09:26	07/05/24 15:50	1	
Toluene	ND		0.049	mg/Kg		07/02/24 09:26	07/05/24 15:50	1	
Xylenes, Total	ND		0.098	mg/Kg		07/02/24 09:26	07/05/24 15:50	1	
Method: SW846 8021B - Volatile Organic Compounds (GC)									
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac	
4-Bromofluorobenzene (Surr)	87		48 - 145			07/02/24 09:26	07/05/24 15:50	1	
Method: SW846 8015M/D - Diesel Range Organics (DRO) (GC)									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Diesel Range Organics [C10-C28]	ND		9.9	mg/Kg		07/02/24 11:43	07/02/24 17:28	1	
Motor Oil Range Organics [C28-C40]	ND		49	mg/Kg		07/02/24 11:43	07/02/24 17:28	1	
Method: SW846 8015M/D - Diesel Range Organics (DRO) (GC)									
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac	
Di-n-octyl phthalate (Surr)	89		62 - 134			07/02/24 11:43	07/02/24 17:28	1	
Method: EPA 300.0 - Anions, Ion Chromatography									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Chloride	ND		60	mg/Kg		07/02/24 12:18	07/02/24 19:41	20	

Client Sample Results

Client: Vertex
Project/Site: Endurance Lariat Water

Job ID: 885-7160-1

Client Sample ID: BH24-02 4ft

Lab Sample ID: 885-7160-6

Date Collected: 06/27/24 10:15

Matrix: Solid

Date Received: 06/29/24 06:15

Method: SW846 8015M/D - Gasoline Range Organics (GRO) (GC)									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Gasoline Range Organics [C6 - C10]	ND		4.9	mg/Kg		07/02/24 09:26	07/05/24 16:14		1
Method: SW846 8015M/D - Gasoline Range Organics (GRO) (GC)									
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac	
4-Bromofluorobenzene (Surr)	95		35 - 166			07/02/24 09:26	07/05/24 16:14		1
Method: SW846 8021B - Volatile Organic Compounds (GC)									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Benzene	ND		0.025	mg/Kg		07/02/24 09:26	07/05/24 16:14		1
Ethylbenzene	ND		0.049	mg/Kg		07/02/24 09:26	07/05/24 16:14		1
Toluene	ND		0.049	mg/Kg		07/02/24 09:26	07/05/24 16:14		1
Xylenes, Total	ND		0.098	mg/Kg		07/02/24 09:26	07/05/24 16:14		1
Method: SW846 8021B - Volatile Organic Compounds (GC)									
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac	
4-Bromofluorobenzene (Surr)	88		48 - 145			07/02/24 09:26	07/05/24 16:14		1
Method: SW846 8015M/D - Diesel Range Organics (DRO) (GC)									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Diesel Range Organics [C10-C28]	ND		9.6	mg/Kg		07/02/24 11:43	07/02/24 17:39		1
Motor Oil Range Organics [C28-C40]	ND		48	mg/Kg		07/02/24 11:43	07/02/24 17:39		1
Method: SW846 8015M/D - Diesel Range Organics (DRO) (GC)									
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac	
Di-n-octyl phthalate (Surr)	86		62 - 134			07/02/24 11:43	07/02/24 17:39		1
Method: EPA 300.0 - Anions, Ion Chromatography									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Chloride	ND		60	mg/Kg		07/02/24 12:18	07/02/24 19:54		20

Client Sample Results

Client: Vertex
Project/Site: Endurance Lariat Water

Job ID: 885-7160-1

Client Sample ID: BH24-03 0ft Lab Sample ID: 885-7160-7
Date Collected: 06/27/24 10:30 Matrix: Solid
Date Received: 06/29/24 06:15

Method: SW846 8015M/D - Gasoline Range Organics (GRO) (GC)									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Gasoline Range Organics [C6 - C10]	17		5.0	mg/Kg		07/02/24 09:26	07/05/24 16:37		1
Method: SW846 8015M/D - Gasoline Range Organics (GRO) (GC)									
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac	
4-Bromofluorobenzene (Surr)	239	S1+	35 - 166			07/02/24 09:26	07/05/24 16:37		1
Method: SW846 8021B - Volatile Organic Compounds (GC)									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Benzene	ND		0.025	mg/Kg		07/02/24 09:26	07/05/24 16:37		1
Ethylbenzene	ND		0.050	mg/Kg		07/02/24 09:26	07/05/24 16:37		1
Toluene	ND		0.050	mg/Kg		07/02/24 09:26	07/05/24 16:37		1
Xylenes, Total	0.35		0.10	mg/Kg		07/02/24 09:26	07/05/24 16:37		1
Method: SW846 8021B - Volatile Organic Compounds (GC)									
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac	
4-Bromofluorobenzene (Surr)	96		48 - 145			07/02/24 09:26	07/05/24 16:37		1
Method: SW846 8015M/D - Diesel Range Organics (DRO) (GC)									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Diesel Range Organics [C10-C28]	3900		94	mg/Kg		07/02/24 11:43	07/02/24 17:50		10
Motor Oil Range Organics [C28-C40]	1800		470	mg/Kg		07/02/24 11:43	07/02/24 17:50		10
Method: SW846 8015M/D - Diesel Range Organics (DRO) (GC)									
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac	
Di-n-octyl phthalate (Surr)	0	S1- D	62 - 134			07/02/24 11:43	07/02/24 17:50		10
Method: EPA 300.0 - Anions, Ion Chromatography									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Chloride	ND		60	mg/Kg		07/02/24 12:18	07/02/24 20:07		20

Client Sample Results

Client: Vertex
Project/Site: Endurance Lariat Water

Job ID: 885-7160-1

Client Sample ID: BH24-03 2ft Lab Sample ID: 885-7160-8
Date Collected: 06/27/24 10:45 Matrix: Solid
Date Received: 06/29/24 06:15

Method: SW846 8015M/D - Gasoline Range Organics (GRO) (GC)									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Gasoline Range Organics [C6 - C10]	ND		4.9	mg/Kg		07/02/24 09:26	07/05/24 17:24	1	
Method: SW846 8015M/D - Gasoline Range Organics (GRO) (GC)									
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac	
4-Bromofluorobenzene (Surr)	114		35 - 166			07/02/24 09:26	07/05/24 17:24	1	
Method: SW846 8021B - Volatile Organic Compounds (GC)									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Benzene	ND		0.025	mg/Kg		07/02/24 09:26	07/05/24 17:24	1	
Ethylbenzene	ND		0.049	mg/Kg		07/02/24 09:26	07/05/24 17:24	1	
Toluene	ND		0.049	mg/Kg		07/02/24 09:26	07/05/24 17:24	1	
Xylenes, Total	ND		0.098	mg/Kg		07/02/24 09:26	07/05/24 17:24	1	
Method: SW846 8021B - Volatile Organic Compounds (GC)									
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac	
4-Bromofluorobenzene (Surr)	89		48 - 145			07/02/24 09:26	07/05/24 17:24	1	
Method: SW846 8015M/D - Diesel Range Organics (DRO) (GC)									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Diesel Range Organics [C10-C28]	730		9.9	mg/Kg		07/02/24 11:43	07/02/24 18:02	1	
Motor Oil Range Organics [C28-C40]	390		49	mg/Kg		07/02/24 11:43	07/02/24 18:02	1	
Method: SW846 8015M/D - Diesel Range Organics (DRO) (GC)									
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac	
Di-n-octyl phthalate (Surr)	96		62 - 134			07/02/24 11:43	07/02/24 18:02	1	
Method: EPA 300.0 - Anions, Ion Chromatography									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Chloride	ND		59	mg/Kg		07/03/24 09:05	07/03/24 11:49	20	

Client Sample Results

Client: Vertex
Project/Site: Endurance Lariat Water

Job ID: 885-7160-1

Client Sample ID: BH24-03 4ft Lab Sample ID: 885-7160-9
Date Collected: 06/27/24 11:00 Matrix: Solid
Date Received: 06/29/24 06:15

Method: SW846 8015M/D - Gasoline Range Organics (GRO) (GC)									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Gasoline Range Organics [C6 - C10]	ND		4.8	mg/Kg		07/02/24 09:26	07/05/24 17:48	1	

Method: SW846 8015M/D - Gasoline Range Organics (GRO) (GC)									
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac	
4-Bromofluorobenzene (Surr)	112		35 - 166			07/02/24 09:26	07/05/24 17:48	1	

Method: SW846 8021B - Volatile Organic Compounds (GC)									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Benzene	ND		0.024	mg/Kg		07/02/24 09:26	07/05/24 17:48	1	
Ethylbenzene	ND		0.048	mg/Kg		07/02/24 09:26	07/05/24 17:48	1	
Toluene	ND		0.048	mg/Kg		07/02/24 09:26	07/05/24 17:48	1	
Xylenes, Total	ND		0.097	mg/Kg		07/02/24 09:26	07/05/24 17:48	1	

Method: SW846 8021B - Volatile Organic Compounds (GC)									
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac	
4-Bromofluorobenzene (Surr)	88		48 - 145			07/02/24 09:26	07/05/24 17:48	1	

Method: SW846 8015M/D - Diesel Range Organics (DRO) (GC)									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Diesel Range Organics [C10-C28]	1700		47	mg/Kg		07/02/24 11:43	07/03/24 10:04	5	
Motor Oil Range Organics [C28-C40]	920		230	mg/Kg		07/02/24 11:43	07/03/24 10:04	5	

Method: SW846 8015M/D - Diesel Range Organics (DRO) (GC)									
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac	
Di-n-octyl phthalate (Surr)	97		62 - 134			07/02/24 11:43	07/03/24 10:04	5	

Method: EPA 300.0 - Anions, Ion Chromatography									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Chloride	ND		60	mg/Kg		07/03/24 09:05	07/03/24 12:26	20	

Client Sample Results

Client: Vertex
Project/Site: Endurance Lariat Water

Job ID: 885-7160-1

Client Sample ID: BH24-04 0ft Lab Sample ID: 885-7160-10
Date Collected: 06/27/24 11:15 Matrix: Solid
Date Received: 06/29/24 06:15

Method: SW846 8015M/D - Gasoline Range Organics (GRO) (GC)									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Gasoline Range Organics [C6 - C10]	ND		4.8	mg/Kg		07/02/24 09:26	07/05/24 18:11	1	
Method: SW846 8015M/D - Gasoline Range Organics (GRO) (GC)									
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac	
4-Bromofluorobenzene (Surr)	95		35 - 166			07/02/24 09:26	07/05/24 18:11	1	
Method: SW846 8021B - Volatile Organic Compounds (GC)									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Benzene	ND		0.024	mg/Kg		07/02/24 09:26	07/05/24 18:11	1	
Ethylbenzene	ND		0.048	mg/Kg		07/02/24 09:26	07/05/24 18:11	1	
Toluene	ND		0.048	mg/Kg		07/02/24 09:26	07/05/24 18:11	1	
Xylenes, Total	ND		0.096	mg/Kg		07/02/24 09:26	07/05/24 18:11	1	
Method: SW846 8021B - Volatile Organic Compounds (GC)									
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac	
4-Bromofluorobenzene (Surr)	87		48 - 145			07/02/24 09:26	07/05/24 18:11	1	
Method: SW846 8015M/D - Diesel Range Organics (DRO) (GC)									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Diesel Range Organics [C10-C28]	ND		10	mg/Kg		07/02/24 11:43	07/02/24 18:56	1	
Motor Oil Range Organics [C28-C40]	ND		50	mg/Kg		07/02/24 11:43	07/02/24 18:56	1	
Method: SW846 8015M/D - Diesel Range Organics (DRO) (GC)									
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac	
Di-n-octyl phthalate (Surr)	80		62 - 134			07/02/24 11:43	07/02/24 18:56	1	
Method: EPA 300.0 - Anions, Ion Chromatography									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Chloride	ND		59	mg/Kg		07/03/24 09:05	07/03/24 12:39	20	

Client Sample Results

Client: Vertex
Project/Site: Endurance Lariat Water

Job ID: 885-7160-1

Client Sample ID: BH24-04 2ft

Lab Sample ID: 885-7160-11

Date Collected: 06/27/24 11:30

Matrix: Solid

Date Received: 06/29/24 06:15

Method: SW846 8015M/D - Gasoline Range Organics (GRO) (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics [C6 - C10]	ND		5.0	mg/Kg		07/02/24 09:26	07/05/24 18:34	1

Method: SW846 8015M/D - Gasoline Range Organics (GRO) (GC)

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	96		35 - 166	07/02/24 09:26	07/05/24 18:34	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.025	mg/Kg		07/02/24 09:26	07/05/24 18:34	1
Ethylbenzene	ND		0.050	mg/Kg		07/02/24 09:26	07/05/24 18:34	1
Toluene	ND		0.050	mg/Kg		07/02/24 09:26	07/05/24 18:34	1
Xylenes, Total	ND		0.099	mg/Kg		07/02/24 09:26	07/05/24 18:34	1

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

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	89		48 - 145	07/02/24 09:26	07/05/24 18:34	1

Method: SW846 8015M/D - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		9.2	mg/Kg		07/02/24 11:43	07/02/24 19:18	1
Motor Oil Range Organics [C28-C40]	ND		46	mg/Kg		07/02/24 11:43	07/02/24 19:18	1

Method: SW846 8015M/D - Diesel Range Organics (DRO) (GC)

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Di-n-octyl phthalate (Surr)	89		62 - 134	07/02/24 11:43	07/02/24 19:18	1

Method: EPA 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		59	mg/Kg		07/03/24 09:05	07/03/24 12:51	20

Client Sample Results

Client: Vertex
Project/Site: Endurance Lariat Water

Job ID: 885-7160-1

Client Sample ID: BH24-04 4ft

Lab Sample ID: 885-7160-12

Date Collected: 06/27/24 11:45

Matrix: Solid

Date Received: 06/29/24 06:15

Method: SW846 8015M/D - Gasoline Range Organics (GRO) (GC)									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Gasoline Range Organics [C6 - C10]	ND		4.8	mg/Kg		07/02/24 09:26	07/05/24 18:58	1	
Method: SW846 8015M/D - Gasoline Range Organics (GRO) (GC)									
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac	
4-Bromofluorobenzene (Surr)	94		35 - 166			07/02/24 09:26	07/05/24 18:58	1	
Method: SW846 8021B - Volatile Organic Compounds (GC)									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Benzene	ND		0.024	mg/Kg		07/02/24 09:26	07/05/24 18:58	1	
Ethylbenzene	ND		0.048	mg/Kg		07/02/24 09:26	07/05/24 18:58	1	
Toluene	ND		0.048	mg/Kg		07/02/24 09:26	07/05/24 18:58	1	
Xylenes, Total	ND		0.095	mg/Kg		07/02/24 09:26	07/05/24 18:58	1	
Method: SW846 8021B - Volatile Organic Compounds (GC)									
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac	
4-Bromofluorobenzene (Surr)	86		48 - 145			07/02/24 09:26	07/05/24 18:58	1	
Method: SW846 8015M/D - Diesel Range Organics (DRO) (GC)									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Diesel Range Organics [C10-C28]	ND		9.3	mg/Kg		07/02/24 11:43	07/02/24 19:29	1	
Motor Oil Range Organics [C28-C40]	ND		46	mg/Kg		07/02/24 11:43	07/02/24 19:29	1	
Method: SW846 8015M/D - Diesel Range Organics (DRO) (GC)									
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac	
Di-n-octyl phthalate (Surr)	87		62 - 134			07/02/24 11:43	07/02/24 19:29	1	
Method: EPA 300.0 - Anions, Ion Chromatography									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Chloride	ND		60	mg/Kg		07/03/24 09:05	07/03/24 13:03	20	

Client Sample Results

Client: Vertex
Project/Site: Endurance Lariat Water

Job ID: 885-7160-1

Client Sample ID: BH24-05 0ft Lab Sample ID: 885-7160-13
Date Collected: 06/27/24 12:00 Matrix: Solid
Date Received: 06/29/24 06:15

Method: SW846 8015M/D - Gasoline Range Organics (GRO) (GC)									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Gasoline Range Organics [C6 - C10]	ND		4.8	mg/Kg		07/02/24 09:26	07/05/24 19:21	1	
Method: SW846 8015M/D - Gasoline Range Organics (GRO) (GC)									
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac	
4-Bromofluorobenzene (Surr)	97		35 - 166			07/02/24 09:26	07/05/24 19:21	1	
Method: SW846 8021B - Volatile Organic Compounds (GC)									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Benzene	ND		0.024	mg/Kg		07/02/24 09:26	07/05/24 19:21	1	
Ethylbenzene	ND		0.048	mg/Kg		07/02/24 09:26	07/05/24 19:21	1	
Toluene	ND		0.048	mg/Kg		07/02/24 09:26	07/05/24 19:21	1	
Xylenes, Total	ND		0.097	mg/Kg		07/02/24 09:26	07/05/24 19:21	1	
Method: SW846 8021B - Volatile Organic Compounds (GC)									
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac	
4-Bromofluorobenzene (Surr)	88		48 - 145			07/02/24 09:26	07/05/24 19:21	1	
Method: SW846 8015M/D - Diesel Range Organics (DRO) (GC)									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Diesel Range Organics [C10-C28]	ND		9.1	mg/Kg		07/02/24 11:43	07/02/24 19:40	1	
Motor Oil Range Organics [C28-C40]	ND		45	mg/Kg		07/02/24 11:43	07/02/24 19:40	1	
Method: SW846 8015M/D - Diesel Range Organics (DRO) (GC)									
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac	
Di-n-octyl phthalate (Surr)	88		62 - 134			07/02/24 11:43	07/02/24 19:40	1	
Method: EPA 300.0 - Anions, Ion Chromatography									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Chloride	ND		60	mg/Kg		07/03/24 09:05	07/03/24 14:05	20	

Client Sample Results

Client: Vertex
Project/Site: Endurance Lariat Water

Job ID: 885-7160-1

Client Sample ID: BH24-05 2ft Lab Sample ID: 885-7160-14
Date Collected: 06/27/24 12:15 Matrix: Solid
Date Received: 06/29/24 06:15

Method: SW846 8015M/D - Gasoline Range Organics (GRO) (GC)									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Gasoline Range Organics [C6 - C10]	ND		4.9	mg/Kg		07/02/24 09:26	07/05/24 19:45	1	
Method: SW846 8015M/D - Gasoline Range Organics (GRO) (GC)									
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac	
4-Bromofluorobenzene (Surr)	94		35 - 166			07/02/24 09:26	07/05/24 19:45	1	
Method: SW846 8021B - Volatile Organic Compounds (GC)									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Benzene	ND		0.024	mg/Kg		07/02/24 09:26	07/05/24 19:45	1	
Ethylbenzene	ND		0.049	mg/Kg		07/02/24 09:26	07/05/24 19:45	1	
Toluene	ND		0.049	mg/Kg		07/02/24 09:26	07/05/24 19:45	1	
Xylenes, Total	ND		0.098	mg/Kg		07/02/24 09:26	07/05/24 19:45	1	
Method: SW846 8021B - Volatile Organic Compounds (GC)									
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac	
4-Bromofluorobenzene (Surr)	87		48 - 145			07/02/24 09:26	07/05/24 19:45	1	
Method: SW846 8015M/D - Diesel Range Organics (DRO) (GC)									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Diesel Range Organics [C10-C28]	ND		9.6	mg/Kg		07/02/24 11:43	07/02/24 19:51	1	
Motor Oil Range Organics [C28-C40]	ND		48	mg/Kg		07/02/24 11:43	07/02/24 19:51	1	
Method: SW846 8015M/D - Diesel Range Organics (DRO) (GC)									
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac	
Di-n-octyl phthalate (Surr)	87		62 - 134			07/02/24 11:43	07/02/24 19:51	1	
Method: EPA 300.0 - Anions, Ion Chromatography									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Chloride	ND		60	mg/Kg		07/03/24 09:05	07/03/24 14:18	20	

Client Sample Results

Client: Vertex
Project/Site: Endurance Lariat Water

Job ID: 885-7160-1

Client Sample ID: BH24-05 4ft Lab Sample ID: 885-7160-15
Date Collected: 06/27/24 12:30 Matrix: Solid
Date Received: 06/29/24 06:15

Method: SW846 8015M/D - Gasoline Range Organics (GRO) (GC)									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Gasoline Range Organics [C6 - C10]	ND		4.7	mg/Kg		07/02/24 09:26	07/05/24 20:08	1	
Method: SW846 8015M/D - Gasoline Range Organics (GRO) (GC)									
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac	
4-Bromofluorobenzene (Surr)	97		35 - 166			07/02/24 09:26	07/05/24 20:08	1	
Method: SW846 8021B - Volatile Organic Compounds (GC)									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Benzene	ND		0.024	mg/Kg		07/02/24 09:26	07/05/24 20:08	1	
Ethylbenzene	ND		0.047	mg/Kg		07/02/24 09:26	07/05/24 20:08	1	
Toluene	ND		0.047	mg/Kg		07/02/24 09:26	07/05/24 20:08	1	
Xylenes, Total	ND		0.095	mg/Kg		07/02/24 09:26	07/05/24 20:08	1	
Method: SW846 8021B - Volatile Organic Compounds (GC)									
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac	
4-Bromofluorobenzene (Surr)	88		48 - 145			07/02/24 09:26	07/05/24 20:08	1	
Method: SW846 8015M/D - Diesel Range Organics (DRO) (GC)									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Diesel Range Organics [C10-C28]	ND		9.1	mg/Kg		07/02/24 11:43	07/02/24 20:02	1	
Motor Oil Range Organics [C28-C40]	ND		45	mg/Kg		07/02/24 11:43	07/02/24 20:02	1	
Method: SW846 8015M/D - Diesel Range Organics (DRO) (GC)									
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac	
Di-n-octyl phthalate (Surr)	91		62 - 134			07/02/24 11:43	07/02/24 20:02	1	
Method: EPA 300.0 - Anions, Ion Chromatography									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Chloride	ND		60	mg/Kg		07/03/24 09:05	07/03/24 14:30	20	

Client Sample Results

Client: Vertex
Project/Site: Endurance Lariat Water

Job ID: 885-7160-1

Client Sample ID: BH24-06 0ft Lab Sample ID: 885-7160-16
Date Collected: 06/27/24 12:45 Matrix: Solid
Date Received: 06/29/24 06:15

Method: SW846 8015M/D - Gasoline Range Organics (GRO) (GC)									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Gasoline Range Organics [C6 - C10]	ND		5.0	mg/Kg		07/02/24 09:26	07/05/24 20:31	1	
Method: SW846 8015M/D - Gasoline Range Organics (GRO) (GC)									
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac	
4-Bromofluorobenzene (Surr)	91		35 - 166			07/02/24 09:26	07/05/24 20:31	1	
Method: SW846 8021B - Volatile Organic Compounds (GC)									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Benzene	ND		0.025	mg/Kg		07/02/24 09:26	07/05/24 20:31	1	
Ethylbenzene	ND		0.050	mg/Kg		07/02/24 09:26	07/05/24 20:31	1	
Toluene	ND		0.050	mg/Kg		07/02/24 09:26	07/05/24 20:31	1	
Xylenes, Total	ND		0.099	mg/Kg		07/02/24 09:26	07/05/24 20:31	1	
Method: SW846 8021B - Volatile Organic Compounds (GC)									
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac	
4-Bromofluorobenzene (Surr)	83		48 - 145			07/02/24 09:26	07/05/24 20:31	1	
Method: SW846 8015M/D - Diesel Range Organics (DRO) (GC)									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Diesel Range Organics [C10-C28]	ND		9.9	mg/Kg		07/02/24 11:43	07/02/24 20:13	1	
Motor Oil Range Organics [C28-C40]	ND		49	mg/Kg		07/02/24 11:43	07/02/24 20:13	1	
Method: SW846 8015M/D - Diesel Range Organics (DRO) (GC)									
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac	
Di-n-octyl phthalate (Surr)	90		62 - 134			07/02/24 11:43	07/02/24 20:13	1	
Method: EPA 300.0 - Anions, Ion Chromatography									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Chloride	ND		60	mg/Kg		07/03/24 09:05	07/03/24 14:42	20	

Client Sample Results

Client: Vertex
Project/Site: Endurance Lariat Water

Job ID: 885-7160-1

Client Sample ID: BH24-06 2ft

Lab Sample ID: 885-7160-17

Date Collected: 06/27/24 13:00

Matrix: Solid

Date Received: 06/29/24 06:15

Method: SW846 8015M/D - Gasoline Range Organics (GRO) (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics [C6 - C10]	ND		4.9	mg/Kg		07/02/24 09:26	07/05/24 20:55	1

Method: SW846 8015M/D - Gasoline Range Organics (GRO) (GC)

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	96		35 - 166	07/02/24 09:26	07/05/24 20:55	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.025	mg/Kg		07/02/24 09:26	07/05/24 20:55	1
Ethylbenzene	ND		0.049	mg/Kg		07/02/24 09:26	07/05/24 20:55	1
Toluene	ND		0.049	mg/Kg		07/02/24 09:26	07/05/24 20:55	1
Xylenes, Total	ND		0.098	mg/Kg		07/02/24 09:26	07/05/24 20:55	1

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

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	89		48 - 145	07/02/24 09:26	07/05/24 20:55	1

Method: SW846 8015M/D - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		9.2	mg/Kg		07/02/24 11:43	07/02/24 20:24	1
Motor Oil Range Organics [C28-C40]	ND		46	mg/Kg		07/02/24 11:43	07/02/24 20:24	1

Method: SW846 8015M/D - Diesel Range Organics (DRO) (GC)

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Di-n-octyl phthalate (Surr)	89		62 - 134	07/02/24 11:43	07/02/24 20:24	1

Method: EPA 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		60	mg/Kg		07/03/24 09:05	07/03/24 14:55	20

Client Sample Results

Client: Vertex
Project/Site: Endurance Lariat Water

Job ID: 885-7160-1

Client Sample ID: BH24-06 4ft Lab Sample ID: 885-7160-18
Date Collected: 06/27/24 13:15 Matrix: Solid
Date Received: 06/29/24 06:15

Method: SW846 8015M/D - Gasoline Range Organics (GRO) (GC)									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Gasoline Range Organics [C6 - C10]	ND		4.8	mg/Kg		07/02/24 09:26	07/05/24 22:05		1
Method: SW846 8015M/D - Gasoline Range Organics (GRO) (GC)									
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac	
4-Bromofluorobenzene (Surr)	92		35 - 166			07/02/24 09:26	07/05/24 22:05		1
Method: SW846 8021B - Volatile Organic Compounds (GC)									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Benzene	ND		0.024	mg/Kg		07/02/24 09:26	07/05/24 22:05		1
Ethylbenzene	ND		0.048	mg/Kg		07/02/24 09:26	07/05/24 22:05		1
Toluene	ND		0.048	mg/Kg		07/02/24 09:26	07/05/24 22:05		1
Xylenes, Total	ND		0.096	mg/Kg		07/02/24 09:26	07/05/24 22:05		1
Method: SW846 8021B - Volatile Organic Compounds (GC)									
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac	
4-Bromofluorobenzene (Surr)	85		48 - 145			07/02/24 09:26	07/05/24 22:05		1
Method: SW846 8015M/D - Diesel Range Organics (DRO) (GC)									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Diesel Range Organics [C10-C28]	ND		9.6	mg/Kg		07/02/24 11:43	07/02/24 20:36		1
Motor Oil Range Organics [C28-C40]	ND		48	mg/Kg		07/02/24 11:43	07/02/24 20:36		1
Method: SW846 8015M/D - Diesel Range Organics (DRO) (GC)									
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac	
Di-n-octyl phthalate (Surr)	89		62 - 134			07/02/24 11:43	07/02/24 20:36		1
Method: EPA 300.0 - Anions, Ion Chromatography									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Chloride	ND		60	mg/Kg		07/03/24 09:05	07/03/24 15:07		20

Client Sample Results

Client: Vertex
Project/Site: Endurance Lariat Water

Job ID: 885-7160-1

Client Sample ID: BH24-07 0ft Lab Sample ID: 885-7160-19
Date Collected: 06/27/24 13:30 Matrix: Solid
Date Received: 06/29/24 06:15

Method: SW846 8015M/D - Gasoline Range Organics (GRO) (GC)									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Gasoline Range Organics [C6 - C10]	ND		5.0	mg/Kg		07/02/24 09:26	07/05/24 22:29		1
Method: SW846 8015M/D - Gasoline Range Organics (GRO) (GC)									
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac	
4-Bromofluorobenzene (Surr)	94		35 - 166			07/02/24 09:26	07/05/24 22:29		1
Method: SW846 8021B - Volatile Organic Compounds (GC)									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Benzene	ND		0.025	mg/Kg		07/02/24 09:26	07/05/24 22:29		1
Ethylbenzene	ND		0.050	mg/Kg		07/02/24 09:26	07/05/24 22:29		1
Toluene	ND		0.050	mg/Kg		07/02/24 09:26	07/05/24 22:29		1
Xylenes, Total	ND		0.099	mg/Kg		07/02/24 09:26	07/05/24 22:29		1
Method: SW846 8021B - Volatile Organic Compounds (GC)									
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac	
4-Bromofluorobenzene (Surr)	88		48 - 145			07/02/24 09:26	07/05/24 22:29		1
Method: SW846 8015M/D - Diesel Range Organics (DRO) (GC)									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Diesel Range Organics [C10-C28]	ND		9.3	mg/Kg		07/02/24 11:43	07/02/24 20:47		1
Motor Oil Range Organics [C28-C40]	ND		46	mg/Kg		07/02/24 11:43	07/02/24 20:47		1
Method: SW846 8015M/D - Diesel Range Organics (DRO) (GC)									
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac	
Di-n-octyl phthalate (Surr)	86		62 - 134			07/02/24 11:43	07/02/24 20:47		1
Method: EPA 300.0 - Anions, Ion Chromatography									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Chloride	ND		60	mg/Kg		07/03/24 09:05	07/03/24 15:19		20

Client Sample Results

Client: Vertex
Project/Site: Endurance Lariat Water

Job ID: 885-7160-1

Client Sample ID: BH24-07 2ft Lab Sample ID: 885-7160-20
Date Collected: 06/27/24 13:45 Matrix: Solid
Date Received: 06/29/24 06:15

Method: SW846 8015M/D - Gasoline Range Organics (GRO) (GC)									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Gasoline Range Organics [C6 - C10]	ND		4.9	mg/Kg		07/02/24 09:26	07/05/24 22:52	1	
Method: SW846 8015M/D - Gasoline Range Organics (GRO) (GC)									
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac	
4-Bromofluorobenzene (Surr)	97		35 - 166			07/02/24 09:26	07/05/24 22:52	1	
Method: SW846 8021B - Volatile Organic Compounds (GC)									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Benzene	ND		0.024	mg/Kg		07/02/24 09:26	07/05/24 22:52	1	
Ethylbenzene	ND		0.049	mg/Kg		07/02/24 09:26	07/05/24 22:52	1	
Toluene	ND		0.049	mg/Kg		07/02/24 09:26	07/05/24 22:52	1	
Xylenes, Total	ND		0.097	mg/Kg		07/02/24 09:26	07/05/24 22:52	1	
Method: SW846 8021B - Volatile Organic Compounds (GC)									
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac	
4-Bromofluorobenzene (Surr)	90		48 - 145			07/02/24 09:26	07/05/24 22:52	1	
Method: SW846 8015M/D - Diesel Range Organics (DRO) (GC)									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Diesel Range Organics [C10-C28]	ND		9.5	mg/Kg		07/02/24 11:43	07/02/24 20:58	1	
Motor Oil Range Organics [C28-C40]	ND		48	mg/Kg		07/02/24 11:43	07/02/24 20:58	1	
Method: SW846 8015M/D - Diesel Range Organics (DRO) (GC)									
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac	
Di-n-octyl phthalate (Surr)	90		62 - 134			07/02/24 11:43	07/02/24 20:58	1	
Method: EPA 300.0 - Anions, Ion Chromatography									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Chloride	ND		60	mg/Kg		07/03/24 09:05	07/03/24 15:32	20	

Client Sample Results

Client: Vertex
Project/Site: Endurance Lariat Water

Job ID: 885-7160-1

Client Sample ID: BH24-07 4ft

Lab Sample ID: 885-7160-21

Date Collected: 06/27/24 14:00

Matrix: Solid

Date Received: 06/29/24 06:15

Method: SW846 8015M/D - Gasoline Range Organics (GRO) (GC)									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Gasoline Range Organics [C6 - C10]	ND		5.0	mg/Kg		07/02/24 13:17	07/03/24 14:47	1	
Method: SW846 8015M/D - Gasoline Range Organics (GRO) (GC)									
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac	
4-Bromofluorobenzene (Surr)	96		35 - 166			07/02/24 13:17	07/03/24 14:47	1	
Method: SW846 8021B - Volatile Organic Compounds (GC)									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Benzene	ND		0.025	mg/Kg		07/02/24 13:17	07/03/24 14:47	1	
Ethylbenzene	ND		0.050	mg/Kg		07/02/24 13:17	07/03/24 14:47	1	
Toluene	ND		0.050	mg/Kg		07/02/24 13:17	07/03/24 14:47	1	
Xylenes, Total	ND		0.10	mg/Kg		07/02/24 13:17	07/03/24 14:47	1	
Method: SW846 8021B - Volatile Organic Compounds (GC)									
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac	
4-Bromofluorobenzene (Surr)	92		48 - 145			07/02/24 13:17	07/03/24 14:47	1	
Method: SW846 8015M/D - Diesel Range Organics (DRO) (GC)									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Diesel Range Organics [C10-C28]	ND		10	mg/Kg		07/03/24 09:46	07/03/24 13:39	1	
Motor Oil Range Organics [C28-C40]	ND		50	mg/Kg		07/03/24 09:46	07/03/24 13:39	1	
Method: SW846 8015M/D - Diesel Range Organics (DRO) (GC)									
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac	
Di-n-octyl phthalate (Surr)	91		62 - 134			07/03/24 09:46	07/03/24 13:39	1	
Method: EPA 300.0 - Anions, Ion Chromatography									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Chloride	ND		60	mg/Kg		07/03/24 12:45	07/03/24 18:37	20	

Client Sample Results

Client: Vertex
Project/Site: Endurance Lariat Water

Job ID: 885-7160-1

Client Sample ID: BH24-08 0ft Lab Sample ID: 885-7160-22
Date Collected: 06/27/24 14:15 Matrix: Solid
Date Received: 06/29/24 06:15

Method: SW846 8015M/D - Gasoline Range Organics (GRO) (GC)									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Gasoline Range Organics [C6 - C10]	ND		5.0	mg/Kg		07/02/24 13:17	07/03/24 15:09	1	
Method: SW846 8015M/D - Gasoline Range Organics (GRO) (GC)									
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac	
4-Bromofluorobenzene (Surr)	105		35 - 166			07/02/24 13:17	07/03/24 15:09	1	
Method: SW846 8021B - Volatile Organic Compounds (GC)									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Benzene	ND		0.025	mg/Kg		07/02/24 13:17	07/03/24 15:09	1	
Ethylbenzene	ND		0.050	mg/Kg		07/02/24 13:17	07/03/24 15:09	1	
Toluene	ND		0.050	mg/Kg		07/02/24 13:17	07/03/24 15:09	1	
Xylenes, Total	ND		0.10	mg/Kg		07/02/24 13:17	07/03/24 15:09	1	
Method: SW846 8021B - Volatile Organic Compounds (GC)									
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac	
4-Bromofluorobenzene (Surr)	93		48 - 145			07/02/24 13:17	07/03/24 15:09	1	
Method: SW846 8015M/D - Diesel Range Organics (DRO) (GC)									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Diesel Range Organics [C10-C28]	ND		9.9	mg/Kg		07/03/24 09:46	07/03/24 13:50	1	
Motor Oil Range Organics [C28-C40]	ND		50	mg/Kg		07/03/24 09:46	07/03/24 13:50	1	
Method: SW846 8015M/D - Diesel Range Organics (DRO) (GC)									
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac	
Di-n-octyl phthalate (Surr)	106		62 - 134			07/03/24 09:46	07/03/24 13:50	1	
Method: EPA 300.0 - Anions, Ion Chromatography									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Chloride	ND		60	mg/Kg		07/03/24 12:45	07/03/24 19:14	20	

Client Sample Results

Client: Vertex
Project/Site: Endurance Lariat Water

Job ID: 885-7160-1

Client Sample ID: BH24-08 2ft Lab Sample ID: 885-7160-23
Date Collected: 06/27/24 14:30 Matrix: Solid
Date Received: 06/29/24 06:15

Method: SW846 8015M/D - Gasoline Range Organics (GRO) (GC)									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Gasoline Range Organics [C6 - C10]	ND		4.8	mg/Kg		07/02/24 13:17	07/03/24 15:31	1	
Method: SW846 8015M/D - Gasoline Range Organics (GRO) (GC)									
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac	
4-Bromofluorobenzene (Surr)	101		35 - 166			07/02/24 13:17	07/03/24 15:31	1	
Method: SW846 8021B - Volatile Organic Compounds (GC)									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Benzene	ND		0.024	mg/Kg		07/02/24 13:17	07/03/24 15:31	1	
Ethylbenzene	ND		0.048	mg/Kg		07/02/24 13:17	07/03/24 15:31	1	
Toluene	ND		0.048	mg/Kg		07/02/24 13:17	07/03/24 15:31	1	
Xylenes, Total	ND		0.096	mg/Kg		07/02/24 13:17	07/03/24 15:31	1	
Method: SW846 8021B - Volatile Organic Compounds (GC)									
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac	
4-Bromofluorobenzene (Surr)	94		48 - 145			07/02/24 13:17	07/03/24 15:31	1	
Method: SW846 8015M/D - Diesel Range Organics (DRO) (GC)									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Diesel Range Organics [C10-C28]	ND		9.6	mg/Kg		07/03/24 09:46	07/03/24 14:01	1	
Motor Oil Range Organics [C28-C40]	ND		48	mg/Kg		07/03/24 09:46	07/03/24 14:01	1	
Method: SW846 8015M/D - Diesel Range Organics (DRO) (GC)									
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac	
Di-n-octyl phthalate (Surr)	91		62 - 134			07/03/24 09:46	07/03/24 14:01	1	
Method: EPA 300.0 - Anions, Ion Chromatography									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Chloride	ND		60	mg/Kg		07/03/24 12:45	07/03/24 19:26	20	

Client Sample Results

Client: Vertex
Project/Site: Endurance Lariat Water

Job ID: 885-7160-1

Client Sample ID: BH24-08 4ft Lab Sample ID: 885-7160-24
Date Collected: 06/27/24 14:45 Matrix: Solid
Date Received: 06/29/24 06:15

Method: SW846 8015M/D - Gasoline Range Organics (GRO) (GC)									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Gasoline Range Organics [C6 - C10]	ND		5.0	mg/Kg		07/02/24 13:17	07/03/24 15:53	1	
Method: SW846 8015M/D - Gasoline Range Organics (GRO) (GC)									
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac	
4-Bromofluorobenzene (Surr)	101		35 - 166			07/02/24 13:17	07/03/24 15:53	1	
Method: SW846 8021B - Volatile Organic Compounds (GC)									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Benzene	ND		0.025	mg/Kg		07/02/24 13:17	07/03/24 15:53	1	
Ethylbenzene	ND		0.050	mg/Kg		07/02/24 13:17	07/03/24 15:53	1	
Toluene	ND		0.050	mg/Kg		07/02/24 13:17	07/03/24 15:53	1	
Xylenes, Total	ND		0.10	mg/Kg		07/02/24 13:17	07/03/24 15:53	1	
Method: SW846 8021B - Volatile Organic Compounds (GC)									
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac	
4-Bromofluorobenzene (Surr)	93		48 - 145			07/02/24 13:17	07/03/24 15:53	1	
Method: SW846 8015M/D - Diesel Range Organics (DRO) (GC)									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Diesel Range Organics [C10-C28]	ND		9.9	mg/Kg		07/03/24 09:46	07/03/24 14:22	1	
Motor Oil Range Organics [C28-C40]	ND		49	mg/Kg		07/03/24 09:46	07/03/24 14:22	1	
Method: SW846 8015M/D - Diesel Range Organics (DRO) (GC)									
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac	
Di-n-octyl phthalate (Surr)	91		62 - 134			07/03/24 09:46	07/03/24 14:22	1	
Method: EPA 300.0 - Anions, Ion Chromatography									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Chloride	ND		60	mg/Kg		07/03/24 12:45	07/03/24 19:39	20	

QC Sample Results

Client: Vertex
Project/Site: Endurance Lariat Water

Job ID: 885-7160-1

Method: 8015M/D - Gasoline Range Organics (GRO) (GC)

Lab Sample ID: MB 885-7758/1-A						Client Sample ID: Method Blank			
Matrix: Solid						Prep Type: Total/NA			
Analysis Batch: 7988						Prep Batch: 7758			
Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Gasoline Range Organics [C6 - C10]	ND		5.0	mg/Kg		07/02/24 09:26	07/05/24 12:09	1	
Surrogate	MB %Recovery	MB Qualifier	Limits			Prepared	Analyzed	Dil Fac	
4-Bromofluorobenzene (Surr)	91		35 - 166			07/02/24 09:26	07/05/24 12:09	1	

Lab Sample ID: LCS 885-7758/2-A						Client Sample ID: Lab Control Sample			
Matrix: Solid						Prep Type: Total/NA			
Analysis Batch: 7988						Prep Batch: 7758			
Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics [C6 - C10]			25.0	24.1		mg/Kg		96	70 - 130
Surrogate	LCS %Recovery	LCS Qualifier	Limits						
4-Bromofluorobenzene (Surr)	198	S1+	35 - 166						

Lab Sample ID: 885-7160-1 MS						Client Sample ID: BH24-01 0ft			
Matrix: Solid						Prep Type: Total/NA			
Analysis Batch: 7988						Prep Batch: 7758			
Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics [C6 - C10]	ND		25.0	24.2		mg/Kg		97	70 - 130
Surrogate	MS %Recovery	MS Qualifier	Limits						
4-Bromofluorobenzene (Surr)	195	S1+	35 - 166						

Lab Sample ID: 885-7160-1 MSD						Client Sample ID: BH24-01 0ft					
Matrix: Solid						Prep Type: Total/NA					
Analysis Batch: 7988						Prep Batch: 7758					
Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics [C6 - C10]	ND		24.8	24.4		mg/Kg		98	70 - 130	1	20
Surrogate	MSD %Recovery	MSD Qualifier	Limits								
4-Bromofluorobenzene (Surr)	199	S1+	35 - 166								

Lab Sample ID: MB 885-7806/1-A						Client Sample ID: Method Blank			
Matrix: Solid						Prep Type: Total/NA			
Analysis Batch: 7936						Prep Batch: 7806			
Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Gasoline Range Organics [C6 - C10]	ND		5.0	mg/Kg		07/02/24 13:17	07/03/24 11:30	1	
Surrogate	MB %Recovery	MB Qualifier	Limits			Prepared	Analyzed	Dil Fac	
4-Bromofluorobenzene (Surr)	92		35 - 166			07/02/24 13:17	07/03/24 11:30	1	

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QC Sample Results

Client: Vertex
Project/Site: Endurance Lariat Water

Job ID: 885-7160-1

Method: 8015M/D - Gasoline Range Organics (GRO) (GC) (Continued)

Lab Sample ID: LCS 885-7806/2-A				Client Sample ID: Lab Control Sample					
Matrix: Solid				Prep Type: Total/NA					
Analysis Batch: 7936				Prep Batch: 7806					
Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics [C6 - C10]			25.0	24.5		mg/Kg		98	70 - 130
Surrogate		LCS %Recovery	LCS Qualifier	Limits					
4-Bromofluorobenzene (Surr)		206	S1+	35 - 166					

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 885-7758/1-A				Client Sample ID: Method Blank					
Matrix: Solid				Prep Type: Total/NA					
Analysis Batch: 7946				Prep Batch: 7758					
Analyte		MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene		ND		0.025	mg/Kg		07/02/24 09:26	07/05/24 12:09	1
Ethylbenzene		ND		0.050	mg/Kg		07/02/24 09:26	07/05/24 12:09	1
Toluene		ND		0.050	mg/Kg		07/02/24 09:26	07/05/24 12:09	1
Xylenes, Total		ND		0.10	mg/Kg		07/02/24 09:26	07/05/24 12:09	1
Surrogate		MB %Recovery	MB Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)		86		48 - 145			07/02/24 09:26	07/05/24 12:09	1

Lab Sample ID: LCS 885-7758/3-A				Client Sample ID: Lab Control Sample					
Matrix: Solid				Prep Type: Total/NA					
Analysis Batch: 7946				Prep Batch: 7758					
Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene			1.00	0.810		mg/Kg		81	70 - 130
Ethylbenzene			1.00	0.800		mg/Kg		80	70 - 130
m,p-Xylene			2.00	1.61		mg/Kg		81	70 - 130
o-Xylene			1.00	0.784		mg/Kg		78	70 - 130
Toluene			1.00	0.797		mg/Kg		80	70 - 130
Surrogate		LCS %Recovery	LCS Qualifier	Limits					
4-Bromofluorobenzene (Surr)		89		48 - 145					

Lab Sample ID: 885-7160-2 MS				Client Sample ID: BH24-01 2ft					
Matrix: Solid				Prep Type: Total/NA					
Analysis Batch: 7946				Prep Batch: 7758					
Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	ND		0.993	0.802		mg/Kg		81	70 - 130
Ethylbenzene	ND		0.993	0.797		mg/Kg		80	70 - 130
m,p-Xylene	ND		1.99	1.59		mg/Kg		79	70 - 130
o-Xylene	ND		0.993	0.774		mg/Kg		78	70 - 130
Toluene	ND		0.993	0.785		mg/Kg		78	70 - 130
Surrogate		MS %Recovery	MS Qualifier	Limits					
4-Bromofluorobenzene (Surr)		90		48 - 145					

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QC Sample Results

Client: Vertex
Project/Site: Endurance Lariat Water

Job ID: 885-7160-1

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: 885-7160-2 MSD
Matrix: Solid
Analysis Batch: 7946

Client Sample ID: BH24-01 2ft
Prep Type: Total/NA
Prep Batch: 7758

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	ND		0.995	0.784		mg/Kg		79	70 - 130	2	20
Ethylbenzene	ND		0.995	0.784		mg/Kg		79	70 - 130	2	20
m,p-Xylene	ND		1.99	1.59		mg/Kg		79	70 - 130	0	20
o-Xylene	ND		0.995	0.775		mg/Kg		78	70 - 130	0	20
Toluene	ND		0.995	0.762		mg/Kg		75	70 - 130	3	20
Surrogate	MSD %Recovery	MSD Qualifier	Limits								
4-Bromofluorobenzene (Surr)	91		48 - 145								

Lab Sample ID: MB 885-7806/1-A
Matrix: Solid
Analysis Batch: 7937

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 7806

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.025	mg/Kg		07/02/24 13:17	07/03/24 11:30	1
Ethylbenzene	ND		0.050	mg/Kg		07/02/24 13:17	07/03/24 11:30	1
Toluene	ND		0.050	mg/Kg		07/02/24 13:17	07/03/24 11:30	1
Xylenes, Total	ND		0.10	mg/Kg		07/02/24 13:17	07/03/24 11:30	1
Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac		
4-Bromofluorobenzene (Surr)	91		48 - 145	07/02/24 13:17	07/03/24 11:30	1		

Lab Sample ID: LCS 885-7806/3-A
Matrix: Solid
Analysis Batch: 7937

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 7806

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	1.00	0.775		mg/Kg		77	70 - 130
Ethylbenzene	1.00	0.847		mg/Kg		85	70 - 130
m,p-Xylene	2.00	1.70		mg/Kg		85	70 - 130
o-Xylene	1.00	0.851		mg/Kg		85	70 - 130
Toluene	1.00	0.815		mg/Kg		82	70 - 130
Surrogate	LCS %Recovery	LCS Qualifier	Limits				
4-Bromofluorobenzene (Surr)	93		48 - 145				

Method: 8015M/D - Diesel Range Organics (DRO) (GC)

Lab Sample ID: MB 885-7779/1-A
Matrix: Solid
Analysis Batch: 7757

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 7779

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		10	mg/Kg		07/02/24 11:43	07/02/24 16:22	1
Motor Oil Range Organics [C28-C40]	ND		50	mg/Kg		07/02/24 11:43	07/02/24 16:22	1

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QC Sample Results

Client: Vertex
Project/Site: Endurance Lariat Water

Job ID: 885-7160-1

Method: 8015M/D - Diesel Range Organics (DRO) (GC) (Continued)

Lab Sample ID: MB 885-7779/1-A
Matrix: Solid
Analysis Batch: 7757

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 7779

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Di-n-octyl phthalate (Surr)	80		62 - 134	07/02/24 11:43	07/02/24 16:22	1

Lab Sample ID: LCS 885-7779/2-A
Matrix: Solid
Analysis Batch: 7757

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 7779

Analyte			Spike	LCS	LCS	Unit	D	%Rec	%Rec		
			Added	Result	Qualifier			Limits			
Diesel Range Organics [C10-C28]			50.0	45.5		mg/Kg		91	60 - 135		
Surrogate	LCS										
	%Recovery	Qualifier	Limits								
Di-n-octyl phthalate (Surr)	81		62 - 134								

Lab Sample ID: 885-7160-20 MS
Matrix: Solid
Analysis Batch: 7757

Client Sample ID: BH24-07 2ft
Prep Type: Total/NA
Prep Batch: 7779

Analyte	Sample	Sample	Spike	MS	MS	Unit	D	%Rec	%Rec		
	Result	Qualifier	Added	Result	Qualifier				Limits		
Diesel Range Organics [C10-C28]	ND		49.8	49.4		mg/Kg		99	44 - 136		
Surrogate	MS	MS									
	%Recovery	Qualifier	Limits								
Di-n-octyl phthalate (Surr)	91		62 - 134								

Lab Sample ID: 885-7160-20 MSD
Matrix: Solid
Analysis Batch: 7757

Client Sample ID: BH24-07 2ft
Prep Type: Total/NA
Prep Batch: 7779

Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	%Rec	%Rec	RPD	RPD
	Result	Qualifier	Added	Result	Qualifier				Limits		Limit
Diesel Range Organics [C10-C28]	ND		49.9	47.0		mg/Kg		94	44 - 136	5	32
Surrogate	MSD %Recovery	MSD Qualifier	Limits								
Di-n-octyl phthalate (Surr)	88		62 - 134								

Lab Sample ID: MB 885-7860/1-A
Matrix: Solid
Analysis Batch: 7876

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 7860

Analyte	MB	MB	RL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier						
Diesel Range Organics [C10-C28]	ND		10	mg/Kg		07/03/24 09:46	07/03/24 12:35	1
Motor Oil Range Organics [C28-C40]	ND		50	mg/Kg		07/03/24 09:46	07/03/24 12:35	1
Surrogate	MB	MB	Limits			Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier						
Di-n-octyl phthalate (Surr)	83		62 - 134			07/03/24 09:46	07/03/24 12:35	1

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QC Sample Results

Client: Vertex
Project/Site: Endurance Lariat Water

Job ID: 885-7160-1

Method: 8015M/D - Diesel Range Organics (DRO) (GC) (Continued)

Lab Sample ID: LCS 885-7860/2-A

Matrix: Solid

Analysis Batch: 7876

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 7860

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Diesel Range Organics [C10-C28]	50.0	49.3		mg/Kg		99	60 - 135
Surrogate	LCS %Recovery	LCS Qualifier	Limits				
Di-n-octyl phthalate (Surr)	89		62 - 134				

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 885-7780/1-A

Matrix: Solid

Analysis Batch: 7804

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 7780

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		3.0	mg/Kg		07/02/24 12:18	07/02/24 13:54	1

Lab Sample ID: LCS 885-7780/2-A

Matrix: Solid

Analysis Batch: 7804

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 7780

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	30.0	28.2		mg/Kg		94	90 - 110

Lab Sample ID: MB 885-7850/1-A

Matrix: Solid

Analysis Batch: 7895

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 7850

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		3.0	mg/Kg		07/03/24 09:05	07/03/24 10:33	1

Lab Sample ID: LCS 885-7850/2-A

Matrix: Solid

Analysis Batch: 7895

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 7850

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	30.0	27.0		mg/Kg		90	90 - 110

Lab Sample ID: 885-7160-8 MS

Matrix: Solid

Analysis Batch: 7895

Client Sample ID: BH24-03 2ft

Prep Type: Total/NA

Prep Batch: 7850

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	ND		29.7	ND		mg/Kg		NC	50 - 150

Lab Sample ID: 885-7160-8 MSD

Matrix: Solid

Analysis Batch: 7895

Client Sample ID: BH24-03 2ft

Prep Type: Total/NA

Prep Batch: 7850

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	ND		30.1	ND		mg/Kg		NC	50 - 150	NC	20

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QC Sample Results

Client: Vertex
Project/Site: Endurance Lariat Water

Job ID: 885-7160-1

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: 885-7160-11 MS										Client Sample ID: BH24-04 2ft									
Matrix: Solid										Prep Type: Total/NA									
Analysis Batch: 7895										Prep Batch: 7850									
Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits										
Chloride	ND		30.2	ND		mg/Kg		NC	50 - 150										
Lab Sample ID: 885-7160-11 MSD										Client Sample ID: BH24-04 2ft									
Matrix: Solid										Prep Type: Total/NA									
Analysis Batch: 7895										Prep Batch: 7850									
Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD		RPD Limit							
Chloride	ND		29.8	ND		mg/Kg		NC	50 - 150	NC		20							
Lab Sample ID: MB 885-7880/1-A										Client Sample ID: Method Blank									
Matrix: Solid										Prep Type: Total/NA									
Analysis Batch: 7895										Prep Batch: 7880									
Analyte	MB Result	MB Qualifier		RL		Unit	D	Prepared		Analyzed		Dil Fac							
Chloride	ND			3.0		mg/Kg		07/03/24 12:45		07/03/24 16:33		1							
Lab Sample ID: LCS 885-7880/2-A										Client Sample ID: Lab Control Sample									
Matrix: Solid										Prep Type: Total/NA									
Analysis Batch: 7895										Prep Batch: 7880									
Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits										
Chloride			30.0	27.8		mg/Kg		93	90 - 110										
Lab Sample ID: 885-7160-21 MS										Client Sample ID: BH24-07 4ft									
Matrix: Solid										Prep Type: Total/NA									
Analysis Batch: 7895										Prep Batch: 7880									
Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits										
Chloride	ND		30.1	ND		mg/Kg		NC	50 - 150										
Lab Sample ID: 885-7160-21 MSD										Client Sample ID: BH24-07 4ft									
Matrix: Solid										Prep Type: Total/NA									
Analysis Batch: 7895										Prep Batch: 7880									
Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD		RPD Limit							
Chloride	ND		29.9	ND		mg/Kg		NC	50 - 150	NC		20							

QC Association Summary

Client: Vertex
Project/Site: Endurance Lariat Water

Job ID: 885-7160-1

GC VOA

Prep Batch: 7758

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-7160-1	BH24-01 0ft	Total/NA	Solid	5030C	
885-7160-2	BH24-01 2ft	Total/NA	Solid	5030C	
885-7160-3	BH24-01 4ft	Total/NA	Solid	5030C	
885-7160-4	BH24-02 0ft	Total/NA	Solid	5030C	
885-7160-5	BH24-02 2ft	Total/NA	Solid	5030C	
885-7160-6	BH24-02 4ft	Total/NA	Solid	5030C	
885-7160-7	BH24-03 0ft	Total/NA	Solid	5030C	
885-7160-8	BH24-03 2ft	Total/NA	Solid	5030C	
885-7160-9	BH24-03 4ft	Total/NA	Solid	5030C	
885-7160-10	BH24-04 0ft	Total/NA	Solid	5030C	
885-7160-11	BH24-04 2ft	Total/NA	Solid	5030C	
885-7160-12	BH24-04 4ft	Total/NA	Solid	5030C	
885-7160-13	BH24-05 0ft	Total/NA	Solid	5030C	
885-7160-14	BH24-05 2ft	Total/NA	Solid	5030C	
885-7160-15	BH24-05 4ft	Total/NA	Solid	5030C	
885-7160-16	BH24-06 0ft	Total/NA	Solid	5030C	
885-7160-17	BH24-06 2ft	Total/NA	Solid	5030C	
885-7160-18	BH24-06 4ft	Total/NA	Solid	5030C	
885-7160-19	BH24-07 0ft	Total/NA	Solid	5030C	
885-7160-20	BH24-07 2ft	Total/NA	Solid	5030C	
MB 885-7758/1-A	Method Blank	Total/NA	Solid	5030C	
LCS 885-7758/2-A	Lab Control Sample	Total/NA	Solid	5030C	
LCS 885-7758/3-A	Lab Control Sample	Total/NA	Solid	5030C	
885-7160-1 MS	BH24-01 0ft	Total/NA	Solid	5030C	
885-7160-1 MSD	BH24-01 0ft	Total/NA	Solid	5030C	
885-7160-2 MS	BH24-01 2ft	Total/NA	Solid	5030C	
885-7160-2 MSD	BH24-01 2ft	Total/NA	Solid	5030C	

Prep Batch: 7806

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-7160-21	BH24-07 4ft	Total/NA	Solid	5030C	
885-7160-22	BH24-08 0ft	Total/NA	Solid	5030C	
885-7160-23	BH24-08 2ft	Total/NA	Solid	5030C	
885-7160-24	BH24-08 4ft	Total/NA	Solid	5030C	
MB 885-7806/1-A	Method Blank	Total/NA	Solid	5030C	
LCS 885-7806/2-A	Lab Control Sample	Total/NA	Solid	5030C	
LCS 885-7806/3-A	Lab Control Sample	Total/NA	Solid	5030C	

Analysis Batch: 7936

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-7160-21	BH24-07 4ft	Total/NA	Solid	8015M/D	7806
885-7160-22	BH24-08 0ft	Total/NA	Solid	8015M/D	7806
885-7160-23	BH24-08 2ft	Total/NA	Solid	8015M/D	7806
885-7160-24	BH24-08 4ft	Total/NA	Solid	8015M/D	7806
MB 885-7806/1-A	Method Blank	Total/NA	Solid	8015M/D	7806
LCS 885-7806/2-A	Lab Control Sample	Total/NA	Solid	8015M/D	7806

Analysis Batch: 7937

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-7160-21	BH24-07 4ft	Total/NA	Solid	8021B	7806
885-7160-22	BH24-08 0ft	Total/NA	Solid	8021B	7806

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QC Association Summary

Client: Vertex
Project/Site: Endurance Lariat Water

Job ID: 885-7160-1

GC VOA (Continued)

Analysis Batch: 7937 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-7160-23	BH24-08 2ft	Total/NA	Solid	8021B	7806
885-7160-24	BH24-08 4ft	Total/NA	Solid	8021B	7806
MB 885-7806/1-A	Method Blank	Total/NA	Solid	8021B	7806
LCS 885-7806/3-A	Lab Control Sample	Total/NA	Solid	8021B	7806

Analysis Batch: 7946

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-7160-1	BH24-01 0ft	Total/NA	Solid	8021B	7758
885-7160-2	BH24-01 2ft	Total/NA	Solid	8021B	7758
885-7160-3	BH24-01 4ft	Total/NA	Solid	8021B	7758
885-7160-4	BH24-02 0ft	Total/NA	Solid	8021B	7758
885-7160-5	BH24-02 2ft	Total/NA	Solid	8021B	7758
885-7160-6	BH24-02 4ft	Total/NA	Solid	8021B	7758
885-7160-7	BH24-03 0ft	Total/NA	Solid	8021B	7758
885-7160-8	BH24-03 2ft	Total/NA	Solid	8021B	7758
885-7160-9	BH24-03 4ft	Total/NA	Solid	8021B	7758
885-7160-10	BH24-04 0ft	Total/NA	Solid	8021B	7758
885-7160-11	BH24-04 2ft	Total/NA	Solid	8021B	7758
885-7160-12	BH24-04 4ft	Total/NA	Solid	8021B	7758
885-7160-13	BH24-05 0ft	Total/NA	Solid	8021B	7758
885-7160-14	BH24-05 2ft	Total/NA	Solid	8021B	7758
885-7160-15	BH24-05 4ft	Total/NA	Solid	8021B	7758
885-7160-16	BH24-06 0ft	Total/NA	Solid	8021B	7758
885-7160-17	BH24-06 2ft	Total/NA	Solid	8021B	7758
885-7160-18	BH24-06 4ft	Total/NA	Solid	8021B	7758
885-7160-19	BH24-07 0ft	Total/NA	Solid	8021B	7758
885-7160-20	BH24-07 2ft	Total/NA	Solid	8021B	7758
MB 885-7758/1-A	Method Blank	Total/NA	Solid	8021B	7758
LCS 885-7758/3-A	Lab Control Sample	Total/NA	Solid	8021B	7758
885-7160-2 MS	BH24-01 2ft	Total/NA	Solid	8021B	7758
885-7160-2 MSD	BH24-01 2ft	Total/NA	Solid	8021B	7758

Analysis Batch: 7988

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-7160-1	BH24-01 0ft	Total/NA	Solid	8015M/D	7758
885-7160-2	BH24-01 2ft	Total/NA	Solid	8015M/D	7758
885-7160-3	BH24-01 4ft	Total/NA	Solid	8015M/D	7758
885-7160-4	BH24-02 0ft	Total/NA	Solid	8015M/D	7758
885-7160-5	BH24-02 2ft	Total/NA	Solid	8015M/D	7758
885-7160-6	BH24-02 4ft	Total/NA	Solid	8015M/D	7758
885-7160-7	BH24-03 0ft	Total/NA	Solid	8015M/D	7758
885-7160-8	BH24-03 2ft	Total/NA	Solid	8015M/D	7758
885-7160-9	BH24-03 4ft	Total/NA	Solid	8015M/D	7758
885-7160-10	BH24-04 0ft	Total/NA	Solid	8015M/D	7758
885-7160-11	BH24-04 2ft	Total/NA	Solid	8015M/D	7758
885-7160-12	BH24-04 4ft	Total/NA	Solid	8015M/D	7758
885-7160-13	BH24-05 0ft	Total/NA	Solid	8015M/D	7758
885-7160-14	BH24-05 2ft	Total/NA	Solid	8015M/D	7758
885-7160-15	BH24-05 4ft	Total/NA	Solid	8015M/D	7758
885-7160-16	BH24-06 0ft	Total/NA	Solid	8015M/D	7758
885-7160-17	BH24-06 2ft	Total/NA	Solid	8015M/D	7758

Eurofins Albuquerque

QC Association Summary

Client: Vertex
Project/Site: Endurance Lariat Water

Job ID: 885-7160-1

GC VOA (Continued)

Analysis Batch: 7988 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-7160-18	BH24-06 4ft	Total/NA	Solid	8015M/D	7758
885-7160-19	BH24-07 0ft	Total/NA	Solid	8015M/D	7758
885-7160-20	BH24-07 2ft	Total/NA	Solid	8015M/D	7758
MB 885-7758/1-A	Method Blank	Total/NA	Solid	8015M/D	7758
LCS 885-7758/2-A	Lab Control Sample	Total/NA	Solid	8015M/D	7758
885-7160-1 MS	BH24-01 0ft	Total/NA	Solid	8015M/D	7758
885-7160-1 MSD	BH24-01 0ft	Total/NA	Solid	8015M/D	7758

GC Semi VOA

Analysis Batch: 7757

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-7160-1	BH24-01 0ft	Total/NA	Solid	8015M/D	7779
885-7160-2	BH24-01 2ft	Total/NA	Solid	8015M/D	7779
885-7160-3	BH24-01 4ft	Total/NA	Solid	8015M/D	7779
885-7160-4	BH24-02 0ft	Total/NA	Solid	8015M/D	7779
885-7160-5	BH24-02 2ft	Total/NA	Solid	8015M/D	7779
885-7160-6	BH24-02 4ft	Total/NA	Solid	8015M/D	7779
885-7160-7	BH24-03 0ft	Total/NA	Solid	8015M/D	7779
885-7160-8	BH24-03 2ft	Total/NA	Solid	8015M/D	7779
885-7160-10	BH24-04 0ft	Total/NA	Solid	8015M/D	7779
885-7160-11	BH24-04 2ft	Total/NA	Solid	8015M/D	7779
885-7160-12	BH24-04 4ft	Total/NA	Solid	8015M/D	7779
885-7160-13	BH24-05 0ft	Total/NA	Solid	8015M/D	7779
885-7160-14	BH24-05 2ft	Total/NA	Solid	8015M/D	7779
885-7160-15	BH24-05 4ft	Total/NA	Solid	8015M/D	7779
885-7160-16	BH24-06 0ft	Total/NA	Solid	8015M/D	7779
885-7160-17	BH24-06 2ft	Total/NA	Solid	8015M/D	7779
885-7160-18	BH24-06 4ft	Total/NA	Solid	8015M/D	7779
885-7160-19	BH24-07 0ft	Total/NA	Solid	8015M/D	7779
885-7160-20	BH24-07 2ft	Total/NA	Solid	8015M/D	7779
MB 885-7779/1-A	Method Blank	Total/NA	Solid	8015M/D	7779
LCS 885-7779/2-A	Lab Control Sample	Total/NA	Solid	8015M/D	7779
885-7160-20 MS	BH24-07 2ft	Total/NA	Solid	8015M/D	7779
885-7160-20 MSD	BH24-07 2ft	Total/NA	Solid	8015M/D	7779

Prep Batch: 7779

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-7160-1	BH24-01 0ft	Total/NA	Solid	SHAKE	
885-7160-2	BH24-01 2ft	Total/NA	Solid	SHAKE	
885-7160-3	BH24-01 4ft	Total/NA	Solid	SHAKE	
885-7160-4	BH24-02 0ft	Total/NA	Solid	SHAKE	
885-7160-5	BH24-02 2ft	Total/NA	Solid	SHAKE	
885-7160-6	BH24-02 4ft	Total/NA	Solid	SHAKE	
885-7160-7	BH24-03 0ft	Total/NA	Solid	SHAKE	
885-7160-8	BH24-03 2ft	Total/NA	Solid	SHAKE	
885-7160-9	BH24-03 4ft	Total/NA	Solid	SHAKE	
885-7160-10	BH24-04 0ft	Total/NA	Solid	SHAKE	
885-7160-11	BH24-04 2ft	Total/NA	Solid	SHAKE	
885-7160-12	BH24-04 4ft	Total/NA	Solid	SHAKE	
885-7160-13	BH24-05 0ft	Total/NA	Solid	SHAKE	

Eurofins Albuquerque

QC Association Summary

Client: Vertex
Project/Site: Endurance Lariat Water

Job ID: 885-7160-1

GC Semi VOA (Continued)

Prep Batch: 7779 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-7160-14	BH24-05 2ft	Total/NA	Solid	SHAKE	
885-7160-15	BH24-05 4ft	Total/NA	Solid	SHAKE	
885-7160-16	BH24-06 0ft	Total/NA	Solid	SHAKE	
885-7160-17	BH24-06 2ft	Total/NA	Solid	SHAKE	
885-7160-18	BH24-06 4ft	Total/NA	Solid	SHAKE	
885-7160-19	BH24-07 0ft	Total/NA	Solid	SHAKE	
885-7160-20	BH24-07 2ft	Total/NA	Solid	SHAKE	
MB 885-7779/1-A	Method Blank	Total/NA	Solid	SHAKE	
LCS 885-7779/2-A	Lab Control Sample	Total/NA	Solid	SHAKE	
885-7160-20 MS	BH24-07 2ft	Total/NA	Solid	SHAKE	
885-7160-20 MSD	BH24-07 2ft	Total/NA	Solid	SHAKE	

Analysis Batch: 7858

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-7160-9	BH24-03 4ft	Total/NA	Solid	8015M/D	7779

Prep Batch: 7860

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-7160-21	BH24-07 4ft	Total/NA	Solid	SHAKE	
885-7160-22	BH24-08 0ft	Total/NA	Solid	SHAKE	
885-7160-23	BH24-08 2ft	Total/NA	Solid	SHAKE	
885-7160-24	BH24-08 4ft	Total/NA	Solid	SHAKE	
MB 885-7860/1-A	Method Blank	Total/NA	Solid	SHAKE	
LCS 885-7860/2-A	Lab Control Sample	Total/NA	Solid	SHAKE	

Analysis Batch: 7876

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-7160-21	BH24-07 4ft	Total/NA	Solid	8015M/D	7860
885-7160-22	BH24-08 0ft	Total/NA	Solid	8015M/D	7860
885-7160-23	BH24-08 2ft	Total/NA	Solid	8015M/D	7860
885-7160-24	BH24-08 4ft	Total/NA	Solid	8015M/D	7860
MB 885-7860/1-A	Method Blank	Total/NA	Solid	8015M/D	7860
LCS 885-7860/2-A	Lab Control Sample	Total/NA	Solid	8015M/D	7860

HPLC/IC

Prep Batch: 7780

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-7160-1	BH24-01 0ft	Total/NA	Solid	300_Prep	
885-7160-2	BH24-01 2ft	Total/NA	Solid	300_Prep	
885-7160-3	BH24-01 4ft	Total/NA	Solid	300_Prep	
885-7160-4	BH24-02 0ft	Total/NA	Solid	300_Prep	
885-7160-5	BH24-02 2ft	Total/NA	Solid	300_Prep	
885-7160-6	BH24-02 4ft	Total/NA	Solid	300_Prep	
885-7160-7	BH24-03 0ft	Total/NA	Solid	300_Prep	
MB 885-7780/1-A	Method Blank	Total/NA	Solid	300_Prep	
LCS 885-7780/2-A	Lab Control Sample	Total/NA	Solid	300_Prep	

Analysis Batch: 7804

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-7160-1	BH24-01 0ft	Total/NA	Solid	300.0	7780

Eurofins Albuquerque

QC Association Summary

Client: Vertex
Project/Site: Endurance Lariat Water

Job ID: 885-7160-1

HPLC/IC (Continued)

Analysis Batch: 7804 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-7160-2	BH24-01 2ft	Total/NA	Solid	300.0	7780
885-7160-3	BH24-01 4ft	Total/NA	Solid	300.0	7780
885-7160-4	BH24-02 0ft	Total/NA	Solid	300.0	7780
885-7160-5	BH24-02 2ft	Total/NA	Solid	300.0	7780
885-7160-6	BH24-02 4ft	Total/NA	Solid	300.0	7780
885-7160-7	BH24-03 0ft	Total/NA	Solid	300.0	7780
MB 885-7780/1-A	Method Blank	Total/NA	Solid	300.0	7780
LCS 885-7780/2-A	Lab Control Sample	Total/NA	Solid	300.0	7780

Prep Batch: 7850

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-7160-8	BH24-03 2ft	Total/NA	Solid	300_Prep	
885-7160-9	BH24-03 4ft	Total/NA	Solid	300_Prep	
885-7160-10	BH24-04 0ft	Total/NA	Solid	300_Prep	
885-7160-11	BH24-04 2ft	Total/NA	Solid	300_Prep	
885-7160-12	BH24-04 4ft	Total/NA	Solid	300_Prep	
885-7160-13	BH24-05 0ft	Total/NA	Solid	300_Prep	
885-7160-14	BH24-05 2ft	Total/NA	Solid	300_Prep	
885-7160-15	BH24-05 4ft	Total/NA	Solid	300_Prep	
885-7160-16	BH24-06 0ft	Total/NA	Solid	300_Prep	
885-7160-17	BH24-06 2ft	Total/NA	Solid	300_Prep	
885-7160-18	BH24-06 4ft	Total/NA	Solid	300_Prep	
885-7160-19	BH24-07 0ft	Total/NA	Solid	300_Prep	
885-7160-20	BH24-07 2ft	Total/NA	Solid	300_Prep	
MB 885-7850/1-A	Method Blank	Total/NA	Solid	300_Prep	
LCS 885-7850/2-A	Lab Control Sample	Total/NA	Solid	300_Prep	
885-7160-8 MS	BH24-03 2ft	Total/NA	Solid	300_Prep	
885-7160-8 MSD	BH24-03 2ft	Total/NA	Solid	300_Prep	
885-7160-11 MS	BH24-04 2ft	Total/NA	Solid	300_Prep	
885-7160-11 MSD	BH24-04 2ft	Total/NA	Solid	300_Prep	

Prep Batch: 7880

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-7160-21	BH24-07 4ft	Total/NA	Solid	300_Prep	
885-7160-22	BH24-08 0ft	Total/NA	Solid	300_Prep	
885-7160-23	BH24-08 2ft	Total/NA	Solid	300_Prep	
885-7160-24	BH24-08 4ft	Total/NA	Solid	300_Prep	
MB 885-7880/1-A	Method Blank	Total/NA	Solid	300_Prep	
LCS 885-7880/2-A	Lab Control Sample	Total/NA	Solid	300_Prep	
885-7160-21 MS	BH24-07 4ft	Total/NA	Solid	300_Prep	
885-7160-21 MSD	BH24-07 4ft	Total/NA	Solid	300_Prep	

Analysis Batch: 7895

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-7160-8	BH24-03 2ft	Total/NA	Solid	300.0	7850
885-7160-9	BH24-03 4ft	Total/NA	Solid	300.0	7850
885-7160-10	BH24-04 0ft	Total/NA	Solid	300.0	7850
885-7160-11	BH24-04 2ft	Total/NA	Solid	300.0	7850
885-7160-12	BH24-04 4ft	Total/NA	Solid	300.0	7850
885-7160-13	BH24-05 0ft	Total/NA	Solid	300.0	7850
885-7160-14	BH24-05 2ft	Total/NA	Solid	300.0	7850

Eurofins Albuquerque

QC Association Summary

Client: Vertex
Project/Site: Endurance Lariat Water

Job ID: 885-7160-1

HPLC/IC (Continued)

Analysis Batch: 7895 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-7160-15	BH24-05 4ft	Total/NA	Solid	300.0	7850
885-7160-16	BH24-06 0ft	Total/NA	Solid	300.0	7850
885-7160-17	BH24-06 2ft	Total/NA	Solid	300.0	7850
885-7160-18	BH24-06 4ft	Total/NA	Solid	300.0	7850
885-7160-19	BH24-07 0ft	Total/NA	Solid	300.0	7850
885-7160-20	BH24-07 2ft	Total/NA	Solid	300.0	7850
885-7160-21	BH24-07 4ft	Total/NA	Solid	300.0	7880
885-7160-22	BH24-08 0ft	Total/NA	Solid	300.0	7880
885-7160-23	BH24-08 2ft	Total/NA	Solid	300.0	7880
885-7160-24	BH24-08 4ft	Total/NA	Solid	300.0	7880
MB 885-7850/1-A	Method Blank	Total/NA	Solid	300.0	7850
MB 885-7880/1-A	Method Blank	Total/NA	Solid	300.0	7880
LCS 885-7850/2-A	Lab Control Sample	Total/NA	Solid	300.0	7850
LCS 885-7880/2-A	Lab Control Sample	Total/NA	Solid	300.0	7880
885-7160-8 MS	BH24-03 2ft	Total/NA	Solid	300.0	7850
885-7160-8 MSD	BH24-03 2ft	Total/NA	Solid	300.0	7850
885-7160-11 MS	BH24-04 2ft	Total/NA	Solid	300.0	7850
885-7160-11 MSD	BH24-04 2ft	Total/NA	Solid	300.0	7850
885-7160-21 MS	BH24-07 4ft	Total/NA	Solid	300.0	7880
885-7160-21 MSD	BH24-07 4ft	Total/NA	Solid	300.0	7880

Lab Chronicle

Client: Vertex
Project/Site: Endurance Lariat Water

Job ID: 885-7160-1

Client Sample ID: BH24-01 0ft
Date Collected: 06/27/24 09:00
Date Received: 06/29/24 06:15

Lab Sample ID: 885-7160-1
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			7758	AT	EET ALB	07/02/24 09:26
Total/NA	Analysis	8015M/D		1	7988	JP	EET ALB	07/05/24 12:43
Total/NA	Prep	5030C			7758	AT	EET ALB	07/02/24 09:26
Total/NA	Analysis	8021B		1	7946	JP	EET ALB	07/05/24 12:43
Total/NA	Prep	SHAKE			7779	KR	EET ALB	07/02/24 11:43
Total/NA	Analysis	8015M/D		1	7757	PD	EET ALB	07/02/24 16:44
Total/NA	Prep	300_Prep			7780	RC	EET ALB	07/02/24 12:18
Total/NA	Analysis	300.0		20	7804	RC	EET ALB	07/02/24 18:24

Client Sample ID: BH24-01 2ft
Date Collected: 06/27/24 09:15
Date Received: 06/29/24 06:15

Lab Sample ID: 885-7160-2
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			7758	AT	EET ALB	07/02/24 09:26
Total/NA	Analysis	8015M/D		1	7988	JP	EET ALB	07/05/24 13:53
Total/NA	Prep	5030C			7758	AT	EET ALB	07/02/24 09:26
Total/NA	Analysis	8021B		1	7946	JP	EET ALB	07/05/24 13:53
Total/NA	Prep	SHAKE			7779	KR	EET ALB	07/02/24 11:43
Total/NA	Analysis	8015M/D		1	7757	PD	EET ALB	07/02/24 16:55
Total/NA	Prep	300_Prep			7780	RC	EET ALB	07/02/24 12:18
Total/NA	Analysis	300.0		20	7804	RC	EET ALB	07/02/24 19:03

Client Sample ID: BH24-01 4ft
Date Collected: 06/27/24 09:30
Date Received: 06/29/24 06:15

Lab Sample ID: 885-7160-3
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			7758	AT	EET ALB	07/02/24 09:26
Total/NA	Analysis	8015M/D		1	7988	JP	EET ALB	07/05/24 15:03
Total/NA	Prep	5030C			7758	AT	EET ALB	07/02/24 09:26
Total/NA	Analysis	8021B		1	7946	JP	EET ALB	07/05/24 15:03
Total/NA	Prep	SHAKE			7779	KR	EET ALB	07/02/24 11:43
Total/NA	Analysis	8015M/D		1	7757	PD	EET ALB	07/02/24 17:06
Total/NA	Prep	300_Prep			7780	RC	EET ALB	07/02/24 12:18
Total/NA	Analysis	300.0		20	7804	RC	EET ALB	07/02/24 19:15

Client Sample ID: BH24-02 0ft
Date Collected: 06/27/24 09:45
Date Received: 06/29/24 06:15

Lab Sample ID: 885-7160-4
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			7758	AT	EET ALB	07/02/24 09:26
Total/NA	Analysis	8015M/D		1	7988	JP	EET ALB	07/05/24 15:27

Eurofins Albuquerque

Lab Chronicle

Client: Vertex
Project/Site: Endurance Lariat Water

Job ID: 885-7160-1

Client Sample ID: BH24-02 0ft
Date Collected: 06/27/24 09:45
Date Received: 06/29/24 06:15

Lab Sample ID: 885-7160-4
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			7758	AT	EET ALB	07/02/24 09:26
Total/NA	Analysis	8021B		1	7946	JP	EET ALB	07/05/24 15:27
Total/NA	Prep	SHAKE			7779	KR	EET ALB	07/02/24 11:43
Total/NA	Analysis	8015M/D		1	7757	PD	EET ALB	07/02/24 17:17
Total/NA	Prep	300_Prep			7780	RC	EET ALB	07/02/24 12:18
Total/NA	Analysis	300.0		20	7804	RC	EET ALB	07/02/24 19:28

Client Sample ID: BH24-02 2ft
Date Collected: 06/27/24 10:00
Date Received: 06/29/24 06:15

Lab Sample ID: 885-7160-5
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			7758	AT	EET ALB	07/02/24 09:26
Total/NA	Analysis	8015M/D		1	7988	JP	EET ALB	07/05/24 15:50
Total/NA	Prep	5030C			7758	AT	EET ALB	07/02/24 09:26
Total/NA	Analysis	8021B		1	7946	JP	EET ALB	07/05/24 15:50
Total/NA	Prep	SHAKE			7779	KR	EET ALB	07/02/24 11:43
Total/NA	Analysis	8015M/D		1	7757	PD	EET ALB	07/02/24 17:28
Total/NA	Prep	300_Prep			7780	RC	EET ALB	07/02/24 12:18
Total/NA	Analysis	300.0		20	7804	RC	EET ALB	07/02/24 19:41

Client Sample ID: BH24-02 4ft
Date Collected: 06/27/24 10:15
Date Received: 06/29/24 06:15

Lab Sample ID: 885-7160-6
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			7758	AT	EET ALB	07/02/24 09:26
Total/NA	Analysis	8015M/D		1	7988	JP	EET ALB	07/05/24 16:14
Total/NA	Prep	5030C			7758	AT	EET ALB	07/02/24 09:26
Total/NA	Analysis	8021B		1	7946	JP	EET ALB	07/05/24 16:14
Total/NA	Prep	SHAKE			7779	KR	EET ALB	07/02/24 11:43
Total/NA	Analysis	8015M/D		1	7757	PD	EET ALB	07/02/24 17:39
Total/NA	Prep	300_Prep			7780	RC	EET ALB	07/02/24 12:18
Total/NA	Analysis	300.0		20	7804	RC	EET ALB	07/02/24 19:54

Client Sample ID: BH24-03 0ft
Date Collected: 06/27/24 10:30
Date Received: 06/29/24 06:15

Lab Sample ID: 885-7160-7
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			7758	AT	EET ALB	07/02/24 09:26
Total/NA	Analysis	8015M/D		1	7988	JP	EET ALB	07/05/24 16:37
Total/NA	Prep	5030C			7758	AT	EET ALB	07/02/24 09:26
Total/NA	Analysis	8021B		1	7946	JP	EET ALB	07/05/24 16:37

Eurofins Albuquerque

Lab Chronicle

Client: Vertex
Project/Site: Endurance Lariat Water

Job ID: 885-7160-1

Client Sample ID: BH24-03 0ft
Date Collected: 06/27/24 10:30
Date Received: 06/29/24 06:15

Lab Sample ID: 885-7160-7
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	SHAKE			7779	KR	EET ALB	07/02/24 11:43
Total/NA	Analysis	8015M/D		10	7757	PD	EET ALB	07/02/24 17:50
Total/NA	Prep	300_Prep			7780	RC	EET ALB	07/02/24 12:18
Total/NA	Analysis	300.0		20	7804	RC	EET ALB	07/02/24 20:07

Client Sample ID: BH24-03 2ft
Date Collected: 06/27/24 10:45
Date Received: 06/29/24 06:15

Lab Sample ID: 885-7160-8
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			7758	AT	EET ALB	07/02/24 09:26
Total/NA	Analysis	8015M/D		1	7988	JP	EET ALB	07/05/24 17:24
Total/NA	Prep	5030C			7758	AT	EET ALB	07/02/24 09:26
Total/NA	Analysis	8021B		1	7946	JP	EET ALB	07/05/24 17:24
Total/NA	Prep	SHAKE			7779	KR	EET ALB	07/02/24 11:43
Total/NA	Analysis	8015M/D		1	7757	PD	EET ALB	07/02/24 18:02
Total/NA	Prep	300_Prep			7850	RC	EET ALB	07/03/24 09:05
Total/NA	Analysis	300.0		20	7895	MA	EET ALB	07/03/24 11:49

Client Sample ID: BH24-03 4ft
Date Collected: 06/27/24 11:00
Date Received: 06/29/24 06:15

Lab Sample ID: 885-7160-9
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			7758	AT	EET ALB	07/02/24 09:26
Total/NA	Analysis	8015M/D		1	7988	JP	EET ALB	07/05/24 17:48
Total/NA	Prep	5030C			7758	AT	EET ALB	07/02/24 09:26
Total/NA	Analysis	8021B		1	7946	JP	EET ALB	07/05/24 17:48
Total/NA	Prep	SHAKE			7779	KR	EET ALB	07/02/24 11:43
Total/NA	Analysis	8015M/D		5	7858	DH	EET ALB	07/03/24 10:04
Total/NA	Prep	300_Prep			7850	RC	EET ALB	07/03/24 09:05
Total/NA	Analysis	300.0		20	7895	MA	EET ALB	07/03/24 12:26

Client Sample ID: BH24-04 0ft
Date Collected: 06/27/24 11:15
Date Received: 06/29/24 06:15

Lab Sample ID: 885-7160-10
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			7758	AT	EET ALB	07/02/24 09:26
Total/NA	Analysis	8015M/D		1	7988	JP	EET ALB	07/05/24 18:11
Total/NA	Prep	5030C			7758	AT	EET ALB	07/02/24 09:26
Total/NA	Analysis	8021B		1	7946	JP	EET ALB	07/05/24 18:11
Total/NA	Prep	SHAKE			7779	KR	EET ALB	07/02/24 11:43
Total/NA	Analysis	8015M/D		1	7757	PD	EET ALB	07/02/24 18:56

Eurofins Albuquerque

Lab Chronicle

Client: Vertex
Project/Site: Endurance Lariat Water

Job ID: 885-7160-1

Client Sample ID: BH24-04 0ft
Date Collected: 06/27/24 11:15
Date Received: 06/29/24 06:15

Lab Sample ID: 885-7160-10
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	300_Prep			7850	RC	EET ALB	07/03/24 09:05
Total/NA	Analysis	300.0		20	7895	MA	EET ALB	07/03/24 12:39

Client Sample ID: BH24-04 2ft
Date Collected: 06/27/24 11:30
Date Received: 06/29/24 06:15

Lab Sample ID: 885-7160-11
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			7758	AT	EET ALB	07/02/24 09:26
Total/NA	Analysis	8015M/D		1	7988	JP	EET ALB	07/05/24 18:34
Total/NA	Prep	5030C			7758	AT	EET ALB	07/02/24 09:26
Total/NA	Analysis	8021B		1	7946	JP	EET ALB	07/05/24 18:34
Total/NA	Prep	SHAKE			7779	KR	EET ALB	07/02/24 11:43
Total/NA	Analysis	8015M/D		1	7757	PD	EET ALB	07/02/24 19:18
Total/NA	Prep	300_Prep			7850	RC	EET ALB	07/03/24 09:05
Total/NA	Analysis	300.0		20	7895	MA	EET ALB	07/03/24 12:51

Client Sample ID: BH24-04 4ft
Date Collected: 06/27/24 11:45
Date Received: 06/29/24 06:15

Lab Sample ID: 885-7160-12
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			7758	AT	EET ALB	07/02/24 09:26
Total/NA	Analysis	8015M/D		1	7988	JP	EET ALB	07/05/24 18:58
Total/NA	Prep	5030C			7758	AT	EET ALB	07/02/24 09:26
Total/NA	Analysis	8021B		1	7946	JP	EET ALB	07/05/24 18:58
Total/NA	Prep	SHAKE			7779	KR	EET ALB	07/02/24 11:43
Total/NA	Analysis	8015M/D		1	7757	PD	EET ALB	07/02/24 19:29
Total/NA	Prep	300_Prep			7850	RC	EET ALB	07/03/24 09:05
Total/NA	Analysis	300.0		20	7895	MA	EET ALB	07/03/24 13:03

Client Sample ID: BH24-05 0ft
Date Collected: 06/27/24 12:00
Date Received: 06/29/24 06:15

Lab Sample ID: 885-7160-13
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			7758	AT	EET ALB	07/02/24 09:26
Total/NA	Analysis	8015M/D		1	7988	JP	EET ALB	07/05/24 19:21
Total/NA	Prep	5030C			7758	AT	EET ALB	07/02/24 09:26
Total/NA	Analysis	8021B		1	7946	JP	EET ALB	07/05/24 19:21
Total/NA	Prep	SHAKE			7779	KR	EET ALB	07/02/24 11:43
Total/NA	Analysis	8015M/D		1	7757	PD	EET ALB	07/02/24 19:40
Total/NA	Prep	300_Prep			7850	RC	EET ALB	07/03/24 09:05
Total/NA	Analysis	300.0		20	7895	MA	EET ALB	07/03/24 14:05

Eurofins Albuquerque

Lab Chronicle

Client: Vertex
Project/Site: Endurance Lariat Water

Job ID: 885-7160-1

Client Sample ID: BH24-05 2ft
Date Collected: 06/27/24 12:15
Date Received: 06/29/24 06:15

Lab Sample ID: 885-7160-14
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			7758	AT	EET ALB	07/02/24 09:26
Total/NA	Analysis	8015M/D		1	7988	JP	EET ALB	07/05/24 19:45
Total/NA	Prep	5030C			7758	AT	EET ALB	07/02/24 09:26
Total/NA	Analysis	8021B		1	7946	JP	EET ALB	07/05/24 19:45
Total/NA	Prep	SHAKE			7779	KR	EET ALB	07/02/24 11:43
Total/NA	Analysis	8015M/D		1	7757	PD	EET ALB	07/02/24 19:51
Total/NA	Prep	300_Prep			7850	RC	EET ALB	07/03/24 09:05
Total/NA	Analysis	300.0		20	7895	MA	EET ALB	07/03/24 14:18

Client Sample ID: BH24-05 4ft
Date Collected: 06/27/24 12:30
Date Received: 06/29/24 06:15

Lab Sample ID: 885-7160-15
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			7758	AT	EET ALB	07/02/24 09:26
Total/NA	Analysis	8015M/D		1	7988	JP	EET ALB	07/05/24 20:08
Total/NA	Prep	5030C			7758	AT	EET ALB	07/02/24 09:26
Total/NA	Analysis	8021B		1	7946	JP	EET ALB	07/05/24 20:08
Total/NA	Prep	SHAKE			7779	KR	EET ALB	07/02/24 11:43
Total/NA	Analysis	8015M/D		1	7757	PD	EET ALB	07/02/24 20:02
Total/NA	Prep	300_Prep			7850	RC	EET ALB	07/03/24 09:05
Total/NA	Analysis	300.0		20	7895	MA	EET ALB	07/03/24 14:30

Client Sample ID: BH24-06 0ft
Date Collected: 06/27/24 12:45
Date Received: 06/29/24 06:15

Lab Sample ID: 885-7160-16
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			7758	AT	EET ALB	07/02/24 09:26
Total/NA	Analysis	8015M/D		1	7988	JP	EET ALB	07/05/24 20:31
Total/NA	Prep	5030C			7758	AT	EET ALB	07/02/24 09:26
Total/NA	Analysis	8021B		1	7946	JP	EET ALB	07/05/24 20:31
Total/NA	Prep	SHAKE			7779	KR	EET ALB	07/02/24 11:43
Total/NA	Analysis	8015M/D		1	7757	PD	EET ALB	07/02/24 20:13
Total/NA	Prep	300_Prep			7850	RC	EET ALB	07/03/24 09:05
Total/NA	Analysis	300.0		20	7895	MA	EET ALB	07/03/24 14:42

Client Sample ID: BH24-06 2ft
Date Collected: 06/27/24 13:00
Date Received: 06/29/24 06:15

Lab Sample ID: 885-7160-17
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			7758	AT	EET ALB	07/02/24 09:26
Total/NA	Analysis	8015M/D		1	7988	JP	EET ALB	07/05/24 20:55

Eurofins Albuquerque

Lab Chronicle

Client: Vertex
Project/Site: Endurance Lariat Water

Job ID: 885-7160-1

Client Sample ID: BH24-06 2ft
Date Collected: 06/27/24 13:00
Date Received: 06/29/24 06:15

Lab Sample ID: 885-7160-17
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			7758	AT	EET ALB	07/02/24 09:26
Total/NA	Analysis	8021B		1	7946	JP	EET ALB	07/05/24 20:55
Total/NA	Prep	SHAKE			7779	KR	EET ALB	07/02/24 11:43
Total/NA	Analysis	8015M/D		1	7757	PD	EET ALB	07/02/24 20:24
Total/NA	Prep	300_Prep			7850	RC	EET ALB	07/03/24 09:05
Total/NA	Analysis	300.0		20	7895	MA	EET ALB	07/03/24 14:55

Client Sample ID: BH24-06 4ft
Date Collected: 06/27/24 13:15
Date Received: 06/29/24 06:15

Lab Sample ID: 885-7160-18
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			7758	AT	EET ALB	07/02/24 09:26
Total/NA	Analysis	8015M/D		1	7988	JP	EET ALB	07/05/24 22:05
Total/NA	Prep	5030C			7758	AT	EET ALB	07/02/24 09:26
Total/NA	Analysis	8021B		1	7946	JP	EET ALB	07/05/24 22:05
Total/NA	Prep	SHAKE			7779	KR	EET ALB	07/02/24 11:43
Total/NA	Analysis	8015M/D		1	7757	PD	EET ALB	07/02/24 20:36
Total/NA	Prep	300_Prep			7850	RC	EET ALB	07/03/24 09:05
Total/NA	Analysis	300.0		20	7895	MA	EET ALB	07/03/24 15:07

Client Sample ID: BH24-07 0ft
Date Collected: 06/27/24 13:30
Date Received: 06/29/24 06:15

Lab Sample ID: 885-7160-19
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			7758	AT	EET ALB	07/02/24 09:26
Total/NA	Analysis	8015M/D		1	7988	JP	EET ALB	07/05/24 22:29
Total/NA	Prep	5030C			7758	AT	EET ALB	07/02/24 09:26
Total/NA	Analysis	8021B		1	7946	JP	EET ALB	07/05/24 22:29
Total/NA	Prep	SHAKE			7779	KR	EET ALB	07/02/24 11:43
Total/NA	Analysis	8015M/D		1	7757	PD	EET ALB	07/02/24 20:47
Total/NA	Prep	300_Prep			7850	RC	EET ALB	07/03/24 09:05
Total/NA	Analysis	300.0		20	7895	MA	EET ALB	07/03/24 15:19

Client Sample ID: BH24-07 2ft
Date Collected: 06/27/24 13:45
Date Received: 06/29/24 06:15

Lab Sample ID: 885-7160-20
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			7758	AT	EET ALB	07/02/24 09:26
Total/NA	Analysis	8015M/D		1	7988	JP	EET ALB	07/05/24 22:52
Total/NA	Prep	5030C			7758	AT	EET ALB	07/02/24 09:26
Total/NA	Analysis	8021B		1	7946	JP	EET ALB	07/05/24 22:52

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Lab Chronicle

Client: Vertex
Project/Site: Endurance Lariat Water

Job ID: 885-7160-1

Client Sample ID: BH24-07 2ft
Date Collected: 06/27/24 13:45
Date Received: 06/29/24 06:15

Lab Sample ID: 885-7160-20
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	SHAKE			7779	KR	EET ALB	07/02/24 11:43
Total/NA	Analysis	8015M/D		1	7757	PD	EET ALB	07/02/24 20:58
Total/NA	Prep	300_Prep			7850	RC	EET ALB	07/03/24 09:05
Total/NA	Analysis	300.0		20	7895	MA	EET ALB	07/03/24 15:32

Client Sample ID: BH24-07 4ft
Date Collected: 06/27/24 14:00
Date Received: 06/29/24 06:15

Lab Sample ID: 885-7160-21
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			7806	AT	EET ALB	07/02/24 13:17
Total/NA	Analysis	8015M/D		1	7936	AT	EET ALB	07/03/24 14:47
Total/NA	Prep	5030C			7806	AT	EET ALB	07/02/24 13:17
Total/NA	Analysis	8021B		1	7937	AT	EET ALB	07/03/24 14:47
Total/NA	Prep	SHAKE			7860	KR	EET ALB	07/03/24 09:46
Total/NA	Analysis	8015M/D		1	7876	PD	EET ALB	07/03/24 13:39
Total/NA	Prep	300_Prep			7880	RC	EET ALB	07/03/24 12:45
Total/NA	Analysis	300.0		20	7895	MA	EET ALB	07/03/24 18:37

Client Sample ID: BH24-08 0ft
Date Collected: 06/27/24 14:15
Date Received: 06/29/24 06:15

Lab Sample ID: 885-7160-22
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			7806	AT	EET ALB	07/02/24 13:17
Total/NA	Analysis	8015M/D		1	7936	AT	EET ALB	07/03/24 15:09
Total/NA	Prep	5030C			7806	AT	EET ALB	07/02/24 13:17
Total/NA	Analysis	8021B		1	7937	AT	EET ALB	07/03/24 15:09
Total/NA	Prep	SHAKE			7860	KR	EET ALB	07/03/24 09:46
Total/NA	Analysis	8015M/D		1	7876	PD	EET ALB	07/03/24 13:50
Total/NA	Prep	300_Prep			7880	RC	EET ALB	07/03/24 12:45
Total/NA	Analysis	300.0		20	7895	MA	EET ALB	07/03/24 19:14

Client Sample ID: BH24-08 2ft
Date Collected: 06/27/24 14:30
Date Received: 06/29/24 06:15

Lab Sample ID: 885-7160-23
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			7806	AT	EET ALB	07/02/24 13:17
Total/NA	Analysis	8015M/D		1	7936	AT	EET ALB	07/03/24 15:31
Total/NA	Prep	5030C			7806	AT	EET ALB	07/02/24 13:17
Total/NA	Analysis	8021B		1	7937	AT	EET ALB	07/03/24 15:31
Total/NA	Prep	SHAKE			7860	KR	EET ALB	07/03/24 09:46
Total/NA	Analysis	8015M/D		1	7876	PD	EET ALB	07/03/24 14:01

Eurofins Albuquerque

Lab Chronicle

Client: Vertex
Project/Site: Endurance Lariat Water

Job ID: 885-7160-1

Client Sample ID: BH24-08 2ft
Date Collected: 06/27/24 14:30
Date Received: 06/29/24 06:15

Lab Sample ID: 885-7160-23
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	300_Prep			7880	RC	EET ALB	07/03/24 12:45
Total/NA	Analysis	300.0		20	7895	MA	EET ALB	07/03/24 19:26

Client Sample ID: BH24-08 4ft
Date Collected: 06/27/24 14:45
Date Received: 06/29/24 06:15

Lab Sample ID: 885-7160-24
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			7806	AT	EET ALB	07/02/24 13:17
Total/NA	Analysis	8015M/D		1	7936	AT	EET ALB	07/03/24 15:53
Total/NA	Prep	5030C			7806	AT	EET ALB	07/02/24 13:17
Total/NA	Analysis	8021B		1	7937	AT	EET ALB	07/03/24 15:53
Total/NA	Prep	SHAKE			7860	KR	EET ALB	07/03/24 09:46
Total/NA	Analysis	8015M/D		1	7876	PD	EET ALB	07/03/24 14:22
Total/NA	Prep	300_Prep			7880	RC	EET ALB	07/03/24 12:45
Total/NA	Analysis	300.0		20	7895	MA	EET ALB	07/03/24 19:39

Laboratory References:
EET ALB = Eurofins Albuquerque, 4901 Hawkins NE, Albuquerque, NM 87109, TEL (505)345-3975

Accreditation/Certification Summary

Client: Vertex
Project/Site: Endurance Lariat Water

Job ID: 885-7160-1

Laboratory: Eurofins Albuquerque

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
New Mexico	State	NM9425, NM0901	02-26-25
The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.			
Analysis Method	Prep Method	Matrix	Analyte
300.0	300_Prep	Solid	Chloride
8015M/D	5030C	Solid	Gasoline Range Organics [C6 - C10]
8015M/D	SHAKE	Solid	Diesel Range Organics [C10-C28]
8015M/D	SHAKE	Solid	Motor Oil Range Organics [C28-C40]
8021B	5030C	Solid	Benzene
8021B	5030C	Solid	Ethylbenzene
8021B	5030C	Solid	Toluene
8021B	5030C	Solid	Xylenes, Total
Oregon	NELAP	NM100001	02-26-25

Login Sample Receipt Checklist

Client: Vertex

Job Number: 885-7160-1

Login Number: 7160

List Number: 1

Creator: Casarrubias, Tracy

List Source: Eurofins Albuquerque

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
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.	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").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	



Environment Testing

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11

ANALYTICAL REPORT

PREPARED FOR

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

Generated 7/26/2024 9:38:54 AM

JOB DESCRIPTION

Endurance Lariat Water Line

JOB NUMBER

885-7243-1



Eurofins Albuquerque

Job Notes

The test results in this report relate only to the samples as received by the laboratory and will meet all requirements of the methodology, with any exceptions noted. This report shall not be reproduced except in full, without the express written approval of the laboratory. All questions should be directed to the Eurofins Environment Testing South Central, LLC Project Manager.

Authorization



Authorized for release by
Cheyenne Cason, Project Manager
cheyenne.cason@et.eurofinsus.com
(505)345-3975

Generated
7/26/2024 9:38:54 AM

Client: Vertex
Project/Site: Endurance Lariat Water Line

Laboratory Job ID: 885-7243-1

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Definitions/Glossary

Client: Vertex
Project/Site: Endurance Lariat Water Line

Job ID: 885-7243-1

Qualifiers

GC VOA

Qualifier	Qualifier Description
S1+	Surrogate recovery exceeds control limits, high biased.

GC Semi VOA

Qualifier	Qualifier Description
D	Surrogate or matrix spike recoveries were not obtained because the extract was diluted for analysis; also compounds analyzed at a dilution may be flagged with a D.
S1-	Surrogate recovery exceeds control limits, low biased.

HPLC/IC

Qualifier	Qualifier Description
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.
F2	MS/MSD RPD exceeds control limits

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	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: Endurance Lariat Water Line

Job ID: 885-7243-1

Job ID: 885-7243-1Eurofins Albuquerque

Job Narrative
885-7243-1

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 and/or narrative comments are included to explain any exceptions, if applicable.

- Matrix QC may not be reported if insufficient sample is provided 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 7/2/2024 8:03 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 0.6°C.

Gasoline Range Organics

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

GC VOA

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

Diesel Range Organics

Method 8015D_DRO: The following samples required a dilution due to the nature of the sample matrix: BH24-09 0FT (885-7243-1), BH24-09 2FT (885-7243-2), BH24-12 2FT (885-7243-8) and BH24-16 2FT (885-7243-16). Because of this dilution, the surrogate spike concentration in the sample was reduced to a level where the recovery calculation does not provide useful information.

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.

Eurofins Albuquerque

Client Sample Results

Client: Vertex

Job ID: 885-7243-1

Project/Site: Endurance Lariat Water Line

Client Sample ID: BH24-09 0FT

Lab Sample ID: 885-7243-1

Date Collected: 06/28/24 08:00

Matrix: Solid

Date Received: 07/02/24 08:03

Method: SW846 8015M/D - Gasoline Range Organics (GRO) (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics [C6 - C10]	13		4.8	mg/Kg		07/02/24 16:14	07/03/24 22:49	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	147		35 - 166			07/02/24 16:14	07/03/24 22:49	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.024	mg/Kg		07/02/24 16:14	07/03/24 22:49	1
Ethylbenzene	ND		0.048	mg/Kg		07/02/24 16:14	07/03/24 22:49	1
Toluene	ND		0.048	mg/Kg		07/02/24 16:14	07/03/24 22:49	1
Xylenes, Total	ND		0.096	mg/Kg		07/02/24 16:14	07/03/24 22:49	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	126		48 - 145			07/02/24 16:14	07/03/24 22:49	1

Method: SW846 8015M/D - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	3800		87	mg/Kg		07/03/24 13:32	07/03/24 18:01	10
Motor Oil Range Organics [C28-C40]	1900		430	mg/Kg		07/03/24 13:32	07/03/24 18:01	10
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
Di-n-octyl phthalate (Surr)	0	S1- D	62 - 134			07/03/24 13:32	07/03/24 18:01	10

Method: EPA 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	260	F2	60	mg/Kg		07/03/24 15:45	07/05/24 09:15	20

Eurofins Albuquerque

Client Sample Results

Client: Vertex

Job ID: 885-7243-1

Project/Site: Endurance Lariat Water Line

Client Sample ID: BH24-09 2FT

Lab Sample ID: 885-7243-2

Date Collected: 06/28/24 08:10

Matrix: Solid

Date Received: 07/02/24 08:03

Method: SW846 8015M/D - Gasoline Range Organics (GRO) (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics [C6 - C10]	52		5.0	mg/Kg		07/02/24 16:14	07/03/24 23:11	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	733	S1+	35 - 166			07/02/24 16:14	07/03/24 23:11	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.025	mg/Kg		07/02/24 16:14	07/03/24 23:11	1
Ethylbenzene	0.091		0.050	mg/Kg		07/02/24 16:14	07/03/24 23:11	1
Toluene	ND		0.050	mg/Kg		07/02/24 16:14	07/03/24 23:11	1
Xylenes, Total	0.24		0.10	mg/Kg		07/02/24 16:14	07/03/24 23:11	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	112		48 - 145			07/02/24 16:14	07/03/24 23:11	1

Method: SW846 8015M/D - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	3200		95	mg/Kg		07/03/24 13:32	07/03/24 18:13	10
Motor Oil Range Organics [C28-C40]	1400		470	mg/Kg		07/03/24 13:32	07/03/24 18:13	10
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
Di-n-octyl phthalate (Surr)	0	S1- D	62 - 134			07/03/24 13:32	07/03/24 18:13	10

Method: EPA 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	760		60	mg/Kg		07/03/24 15:45	07/05/24 09:52	20

Eurofins Albuquerque

Client Sample Results

Client: Vertex
Project/Site: Endurance Lariat Water Line

Job ID: 885-7243-1

Client Sample ID: BH24-10 0FT Lab Sample ID: 885-7243-3
Date Collected: 06/28/24 08:30 Matrix: Solid
Date Received: 07/02/24 08:03

Method: SW846 8015M/D - Gasoline Range Organics (GRO) (GC)									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Gasoline Range Organics [C6 - C10]	ND		5.0	mg/Kg		07/02/24 16:14	07/03/24 23:33		1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac	
4-Bromofluorobenzene (Surr)	119		35 - 166			07/02/24 16:14	07/03/24 23:33		1
Method: SW846 8021B - Volatile Organic Compounds (GC)									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Benzene	ND		0.025	mg/Kg		07/02/24 16:14	07/03/24 23:33		1
Ethylbenzene	ND		0.050	mg/Kg		07/02/24 16:14	07/03/24 23:33		1
Toluene	ND		0.050	mg/Kg		07/02/24 16:14	07/03/24 23:33		1
Xylenes, Total	ND		0.099	mg/Kg		07/02/24 16:14	07/03/24 23:33		1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac	
4-Bromofluorobenzene (Surr)	94		48 - 145			07/02/24 16:14	07/03/24 23:33		1
Method: SW846 8015M/D - Diesel Range Organics (DRO) (GC)									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Diesel Range Organics [C10-C28]	ND		9.2	mg/Kg		07/03/24 13:32	07/03/24 18:24		1
Motor Oil Range Organics [C28-C40]	ND		46	mg/Kg		07/03/24 13:32	07/03/24 18:24		1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac	
Di-n-octyl phthalate (Surr)	89		62 - 134			07/03/24 13:32	07/03/24 18:24		1
Method: EPA 300.0 - Anions, Ion Chromatography									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Chloride	ND		60	mg/Kg		07/03/24 15:45	07/05/24 10:05		20

Client Sample Results

Client: Vertex
Project/Site: Endurance Lariat Water Line

Job ID: 885-7243-1

Client Sample ID: BH24-10 2FT Lab Sample ID: 885-7243-4
Date Collected: 06/28/24 08:40 Matrix: Solid
Date Received: 07/02/24 08:03

Method: SW846 8015M/D - Gasoline Range Organics (GRO) (GC)									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Gasoline Range Organics [C6 - C10]	ND		5.0	mg/Kg		07/02/24 16:14	07/04/24 00:39		1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac	
4-Bromofluorobenzene (Surr)	101		35 - 166			07/02/24 16:14	07/04/24 00:39		1
Method: SW846 8021B - Volatile Organic Compounds (GC)									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Benzene	ND		0.025	mg/Kg		07/02/24 16:14	07/04/24 00:39		1
Ethylbenzene	ND		0.050	mg/Kg		07/02/24 16:14	07/04/24 00:39		1
Toluene	ND		0.050	mg/Kg		07/02/24 16:14	07/04/24 00:39		1
Xylenes, Total	ND		0.099	mg/Kg		07/02/24 16:14	07/04/24 00:39		1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac	
4-Bromofluorobenzene (Surr)	90		48 - 145			07/02/24 16:14	07/04/24 00:39		1
Method: SW846 8015M/D - Diesel Range Organics (DRO) (GC)									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Diesel Range Organics [C10-C28]	ND		9.0	mg/Kg		07/03/24 13:32	07/03/24 18:36		1
Motor Oil Range Organics [C28-C40]	ND		45	mg/Kg		07/03/24 13:32	07/03/24 18:36		1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac	
Di-n-octyl phthalate (Surr)	93		62 - 134			07/03/24 13:32	07/03/24 18:36		1
Method: EPA 300.0 - Anions, Ion Chromatography									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Chloride	ND		61	mg/Kg		07/03/24 15:45	07/05/24 10:17		20

Client Sample Results

Client: Vertex
Project/Site: Endurance Lariat Water Line

Job ID: 885-7243-1

Client Sample ID: BH24-11 0FT

Lab Sample ID: 885-7243-5

Date Collected: 06/28/24 09:00

Matrix: Solid

Date Received: 07/02/24 08:03

Method: SW846 8015M/D - Gasoline Range Organics (GRO) (GC)									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Gasoline Range Organics [C6 - C10]	ND		4.9	mg/Kg		07/02/24 16:14	07/04/24 01:44	1	
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac	
4-Bromofluorobenzene (Surr)	97		35 - 166			07/02/24 16:14	07/04/24 01:44	1	
Method: SW846 8021B - Volatile Organic Compounds (GC)									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Benzene	ND		0.024	mg/Kg		07/02/24 16:14	07/04/24 01:44	1	
Ethylbenzene	ND		0.049	mg/Kg		07/02/24 16:14	07/04/24 01:44	1	
Toluene	ND		0.049	mg/Kg		07/02/24 16:14	07/04/24 01:44	1	
Xylenes, Total	ND		0.097	mg/Kg		07/02/24 16:14	07/04/24 01:44	1	
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac	
4-Bromofluorobenzene (Surr)	90		48 - 145			07/02/24 16:14	07/04/24 01:44	1	
Method: SW846 8015M/D - Diesel Range Organics (DRO) (GC)									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Diesel Range Organics [C10-C28]	600		49	mg/Kg		07/03/24 13:32	07/05/24 15:34	5	
Motor Oil Range Organics [C28-C40]	510		240	mg/Kg		07/03/24 13:32	07/05/24 15:34	5	
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac	
Di-n-octyl phthalate (Surr)	101		62 - 134			07/03/24 13:32	07/05/24 15:34	5	
Method: EPA 300.0 - Anions, Ion Chromatography									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Chloride	220		60	mg/Kg		07/03/24 15:45	07/05/24 11:19	20	

Client Sample Results

Client: Vertex
Project/Site: Endurance Lariat Water Line

Job ID: 885-7243-1

Client Sample ID: BH24-11 2FT Lab Sample ID: 885-7243-6
Date Collected: 06/28/24 09:10 Matrix: Solid
Date Received: 07/02/24 08:03

Method: SW846 8015M/D - Gasoline Range Organics (GRO) (GC)									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Gasoline Range Organics [C6 - C10]	ND		4.8	mg/Kg		07/02/24 16:14	07/04/24 02:06	1	
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac	
4-Bromofluorobenzene (Surr)	90		35 - 166			07/02/24 16:14	07/04/24 02:06	1	
Method: SW846 8021B - Volatile Organic Compounds (GC)									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Benzene	ND		0.024	mg/Kg		07/02/24 16:14	07/04/24 02:06	1	
Ethylbenzene	ND		0.048	mg/Kg		07/02/24 16:14	07/04/24 02:06	1	
Toluene	ND		0.048	mg/Kg		07/02/24 16:14	07/04/24 02:06	1	
Xylenes, Total	ND		0.096	mg/Kg		07/02/24 16:14	07/04/24 02:06	1	
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac	
4-Bromofluorobenzene (Surr)	91		48 - 145			07/02/24 16:14	07/04/24 02:06	1	
Method: SW846 8015M/D - Diesel Range Organics (DRO) (GC)									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Diesel Range Organics [C10-C28]	ND		9.2	mg/Kg		07/03/24 13:32	07/03/24 18:58	1	
Motor Oil Range Organics [C28-C40]	ND		46	mg/Kg		07/03/24 13:32	07/03/24 18:58	1	
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac	
Di-n-octyl phthalate (Surr)	87		62 - 134			07/03/24 13:32	07/03/24 18:58	1	
Method: EPA 300.0 - Anions, Ion Chromatography									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Chloride	810		60	mg/Kg		07/03/24 15:45	07/05/24 11:31	20	

Client Sample Results

Client: Vertex
Project/Site: Endurance Lariat Water Line

Job ID: 885-7243-1

Client Sample ID: BH24-12 0FT Lab Sample ID: 885-7243-7
Date Collected: 06/28/24 09:30 Matrix: Solid
Date Received: 07/02/24 08:03

Method: SW846 8015M/D - Gasoline Range Organics (GRO) (GC)									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Gasoline Range Organics [C6 - C10]	ND		4.7	mg/Kg		07/02/24 16:14	07/04/24 02:28		1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac	
4-Bromofluorobenzene (Surr)	90		35 - 166			07/02/24 16:14	07/04/24 02:28		1
Method: SW846 8021B - Volatile Organic Compounds (GC)									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Benzene	ND		0.024	mg/Kg		07/02/24 16:14	07/04/24 02:28		1
Ethylbenzene	ND		0.047	mg/Kg		07/02/24 16:14	07/04/24 02:28		1
Toluene	ND		0.047	mg/Kg		07/02/24 16:14	07/04/24 02:28		1
Xylenes, Total	ND		0.095	mg/Kg		07/02/24 16:14	07/04/24 02:28		1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac	
4-Bromofluorobenzene (Surr)	90		48 - 145			07/02/24 16:14	07/04/24 02:28		1
Method: SW846 8015M/D - Diesel Range Organics (DRO) (GC)									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Diesel Range Organics [C10-C28]	ND		9.6	mg/Kg		07/03/24 13:32	07/03/24 19:10		1
Motor Oil Range Organics [C28-C40]	ND		48	mg/Kg		07/03/24 13:32	07/03/24 19:10		1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac	
Di-n-octyl phthalate (Surr)	80		62 - 134			07/03/24 13:32	07/03/24 19:10		1
Method: EPA 300.0 - Anions, Ion Chromatography									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Chloride	150		60	mg/Kg		07/03/24 15:45	07/05/24 11:44		20

Client Sample Results

Client: Vertex

Job ID: 885-7243-1

Project/Site: Endurance Lariat Water Line

Client Sample ID: BH24-12 2FT

Lab Sample ID: 885-7243-8

Date Collected: 06/28/24 09:40

Matrix: Solid

Date Received: 07/02/24 08:03

Method: SW846 8015M/D - Gasoline Range Organics (GRO) (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics [C6 - C10]	73		24	mg/Kg		07/02/24 16:14	07/04/24 02:49	5
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	139		35 - 166			07/02/24 16:14	07/04/24 02:49	5

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.12	mg/Kg		07/02/24 16:14	07/04/24 02:49	5
Ethylbenzene	ND		0.24	mg/Kg		07/02/24 16:14	07/04/24 02:49	5
Toluene	ND		0.24	mg/Kg		07/02/24 16:14	07/04/24 02:49	5
Xylenes, Total	0.58		0.49	mg/Kg		07/02/24 16:14	07/04/24 02:49	5
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	126		48 - 145			07/02/24 16:14	07/04/24 02:49	5

Method: SW846 8015M/D - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	4200		94	mg/Kg		07/03/24 13:32	07/03/24 19:21	10
Motor Oil Range Organics [C28-C40]	1700		470	mg/Kg		07/03/24 13:32	07/03/24 19:21	10
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
Di-n-octyl phthalate (Surr)	0	D S1-	62 - 134			07/03/24 13:32	07/03/24 19:21	10

Method: EPA 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	1700		60	mg/Kg		07/03/24 15:45	07/05/24 11:56	20

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Client Sample Results

Client: Vertex
Project/Site: Endurance Lariat Water Line

Job ID: 885-7243-1

Client Sample ID: BH24-13 0FT

Lab Sample ID: 885-7243-9

Date Collected: 06/28/24 10:00

Matrix: Solid

Date Received: 07/02/24 08:03

Method: SW846 8015M/D - Gasoline Range Organics (GRO) (GC)									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Gasoline Range Organics [C6 - C10]	ND		5.0	mg/Kg		07/02/24 16:14	07/04/24 03:11		1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac	
4-Bromofluorobenzene (Surr)	98		35 - 166			07/02/24 16:14	07/04/24 03:11		1
Method: SW846 8021B - Volatile Organic Compounds (GC)									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Benzene	ND		0.025	mg/Kg		07/02/24 16:14	07/04/24 03:11		1
Ethylbenzene	ND		0.050	mg/Kg		07/02/24 16:14	07/04/24 03:11		1
Toluene	ND		0.050	mg/Kg		07/02/24 16:14	07/04/24 03:11		1
Xylenes, Total	ND		0.099	mg/Kg		07/02/24 16:14	07/04/24 03:11		1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac	
4-Bromofluorobenzene (Surr)	93		48 - 145			07/02/24 16:14	07/04/24 03:11		1
Method: SW846 8015M/D - Diesel Range Organics (DRO) (GC)									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Diesel Range Organics [C10-C28]	ND		9.6	mg/Kg		07/03/24 13:32	07/03/24 19:43		1
Motor Oil Range Organics [C28-C40]	ND		48	mg/Kg		07/03/24 13:32	07/03/24 19:43		1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac	
Di-n-octyl phthalate (Surr)	86		62 - 134			07/03/24 13:32	07/03/24 19:43		1
Method: EPA 300.0 - Anions, Ion Chromatography									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Chloride	440		60	mg/Kg		07/03/24 15:45	07/05/24 12:08		20

Client Sample Results

Client: Vertex
Project/Site: Endurance Lariat Water Line

Job ID: 885-7243-1

Client Sample ID: BH24-13 2FT Lab Sample ID: 885-7243-10
Date Collected: 06/28/24 10:10 Matrix: Solid
Date Received: 07/02/24 08:03

Method: SW846 8015M/D - Gasoline Range Organics (GRO) (GC)									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Gasoline Range Organics [C6 - C10]	ND		4.9	mg/Kg		07/02/24 16:14	07/04/24 03:33	1	
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac	
4-Bromofluorobenzene (Surr)	95		35 - 166			07/02/24 16:14	07/04/24 03:33	1	
Method: SW846 8021B - Volatile Organic Compounds (GC)									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Benzene	ND		0.024	mg/Kg		07/02/24 16:14	07/04/24 03:33	1	
Ethylbenzene	ND		0.049	mg/Kg		07/02/24 16:14	07/04/24 03:33	1	
Toluene	ND		0.049	mg/Kg		07/02/24 16:14	07/04/24 03:33	1	
Xylenes, Total	ND		0.097	mg/Kg		07/02/24 16:14	07/04/24 03:33	1	
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac	
4-Bromofluorobenzene (Surr)	91		48 - 145			07/02/24 16:14	07/04/24 03:33	1	
Method: SW846 8015M/D - Diesel Range Organics (DRO) (GC)									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Diesel Range Organics [C10-C28]	ND		9.9	mg/Kg		07/03/24 13:32	07/03/24 19:55	1	
Motor Oil Range Organics [C28-C40]	ND		49	mg/Kg		07/03/24 13:32	07/03/24 19:55	1	
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac	
Di-n-octyl phthalate (Surr)	86		62 - 134			07/03/24 13:32	07/03/24 19:55	1	
Method: EPA 300.0 - Anions, Ion Chromatography									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Chloride	2400		150	mg/Kg		07/03/24 15:45	07/08/24 18:05	50	

Client Sample Results

Client: Vertex
Project/Site: Endurance Lariat Water Line

Job ID: 885-7243-1

Client Sample ID: BH24-14 0FT Lab Sample ID: 885-7243-11
Date Collected: 06/28/24 10:30 Matrix: Solid
Date Received: 07/02/24 08:03

Method: SW846 8015M/D - Gasoline Range Organics (GRO) (GC)									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Gasoline Range Organics [C6 - C10]	ND		4.9	mg/Kg		07/02/24 16:14	07/04/24 04:17	1	
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac	
4-Bromofluorobenzene (Surr)	89		35 - 166			07/02/24 16:14	07/04/24 04:17	1	
Method: SW846 8021B - Volatile Organic Compounds (GC)									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Benzene	ND		0.024	mg/Kg		07/02/24 16:14	07/04/24 04:17	1	
Ethylbenzene	ND		0.049	mg/Kg		07/02/24 16:14	07/04/24 04:17	1	
Toluene	ND		0.049	mg/Kg		07/02/24 16:14	07/04/24 04:17	1	
Xylenes, Total	ND		0.098	mg/Kg		07/02/24 16:14	07/04/24 04:17	1	
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac	
4-Bromofluorobenzene (Surr)	90		48 - 145			07/02/24 16:14	07/04/24 04:17	1	
Method: SW846 8015M/D - Diesel Range Organics (DRO) (GC)									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Diesel Range Organics [C10-C28]	45		9.1	mg/Kg		07/03/24 13:32	07/03/24 20:06	1	
Motor Oil Range Organics [C28-C40]	46		46	mg/Kg		07/03/24 13:32	07/03/24 20:06	1	
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac	
Di-n-octyl phthalate (Surr)	87		62 - 134			07/03/24 13:32	07/03/24 20:06	1	
Method: EPA 300.0 - Anions, Ion Chromatography									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Chloride	1500		60	mg/Kg		07/03/24 15:45	07/05/24 12:33	20	

Client Sample Results

Client: Vertex
Project/Site: Endurance Lariat Water Line

Job ID: 885-7243-1

Client Sample ID: BH24-14 2FT

Lab Sample ID: 885-7243-12

Date Collected: 06/28/24 10:40

Matrix: Solid

Date Received: 07/02/24 08:03

Method: SW846 8015M/D - Gasoline Range Organics (GRO) (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics [C6 - C10]	ND		5.0	mg/Kg		07/02/24 16:14	07/04/24 04:38	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	98		35 - 166			07/02/24 16:14	07/04/24 04:38	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.025	mg/Kg		07/02/24 16:14	07/04/24 04:38	1
Ethylbenzene	ND		0.050	mg/Kg		07/02/24 16:14	07/04/24 04:38	1
Toluene	ND		0.050	mg/Kg		07/02/24 16:14	07/04/24 04:38	1
Xylenes, Total	ND		0.099	mg/Kg		07/02/24 16:14	07/04/24 04:38	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	91		48 - 145			07/02/24 16:14	07/04/24 04:38	1

Method: SW846 8015M/D - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		9.8	mg/Kg		07/03/24 13:32	07/03/24 20:17	1
Motor Oil Range Organics [C28-C40]	ND		49	mg/Kg		07/03/24 13:32	07/03/24 20:17	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
Di-n-octyl phthalate (Surr)	90		62 - 134			07/03/24 13:32	07/03/24 20:17	1

Method: EPA 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	1900		60	mg/Kg		07/03/24 15:45	07/05/24 12:45	20

Client Sample Results

Client: Vertex
Project/Site: Endurance Lariat Water Line

Job ID: 885-7243-1

Client Sample ID: BH24-15 0FT Lab Sample ID: 885-7243-13
Date Collected: 06/28/24 11:00 Matrix: Solid
Date Received: 07/02/24 08:03

Method: SW846 8015M/D - Gasoline Range Organics (GRO) (GC)									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Gasoline Range Organics [C6 - C10]	ND		4.8	mg/Kg		07/02/24 16:14	07/04/24 05:00		1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac	
4-Bromofluorobenzene (Surr)	97		35 - 166			07/02/24 16:14	07/04/24 05:00		1
Method: SW846 8021B - Volatile Organic Compounds (GC)									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Benzene	ND		0.024	mg/Kg		07/02/24 16:14	07/04/24 05:00		1
Ethylbenzene	ND		0.048	mg/Kg		07/02/24 16:14	07/04/24 05:00		1
Toluene	ND		0.048	mg/Kg		07/02/24 16:14	07/04/24 05:00		1
Xylenes, Total	ND		0.097	mg/Kg		07/02/24 16:14	07/04/24 05:00		1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac	
4-Bromofluorobenzene (Surr)	88		48 - 145			07/02/24 16:14	07/04/24 05:00		1
Method: SW846 8015M/D - Diesel Range Organics (DRO) (GC)									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Diesel Range Organics [C10-C28]	100		9.7	mg/Kg		07/03/24 13:32	07/03/24 20:28		1
Motor Oil Range Organics [C28-C40]	93		48	mg/Kg		07/03/24 13:32	07/03/24 20:28		1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac	
Di-n-octyl phthalate (Surr)	87		62 - 134			07/03/24 13:32	07/03/24 20:28		1
Method: EPA 300.0 - Anions, Ion Chromatography									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Chloride	150		60	mg/Kg		07/03/24 15:45	07/05/24 12:58		20

Client Sample Results

Client: Vertex
Project/Site: Endurance Lariat Water Line

Job ID: 885-7243-1

Client Sample ID: BH24-15 2FT Lab Sample ID: 885-7243-14
Date Collected: 06/28/24 11:10 Matrix: Solid
Date Received: 07/02/24 08:03

Method: SW846 8015M/D - Gasoline Range Organics (GRO) (GC)									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Gasoline Range Organics [C6 - C10]	ND		4.9	mg/Kg		07/02/24 16:14	07/04/24 05:22	1	
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac	
4-Bromofluorobenzene (Surr)	96		35 - 166			07/02/24 16:14	07/04/24 05:22	1	

Method: SW846 8021B - Volatile Organic Compounds (GC)									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Benzene	ND		0.024	mg/Kg		07/02/24 16:14	07/04/24 05:22	1	
Ethylbenzene	ND		0.049	mg/Kg		07/02/24 16:14	07/04/24 05:22	1	
Toluene	ND		0.049	mg/Kg		07/02/24 16:14	07/04/24 05:22	1	
Xylenes, Total	ND		0.098	mg/Kg		07/02/24 16:14	07/04/24 05:22	1	
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac	
4-Bromofluorobenzene (Surr)	89		48 - 145			07/02/24 16:14	07/04/24 05:22	1	

Method: SW846 8015M/D - Diesel Range Organics (DRO) (GC)									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Diesel Range Organics [C10-C28]	38		9.9	mg/Kg		07/03/24 13:32	07/03/24 20:39	1	
Motor Oil Range Organics [C28-C40]	ND		49	mg/Kg		07/03/24 13:32	07/03/24 20:39	1	
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac	
Di-n-octyl phthalate (Surr)	92		62 - 134			07/03/24 13:32	07/03/24 20:39	1	

Method: EPA 300.0 - Anions, Ion Chromatography									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Chloride	2400		150	mg/Kg		07/03/24 15:45	07/08/24 18:30	50	

Client Sample Results

Client: Vertex
Project/Site: Endurance Lariat Water Line

Job ID: 885-7243-1

Client Sample ID: BH24-16 0FT Lab Sample ID: 885-7243-15
Date Collected: 06/28/24 11:30 Matrix: Solid
Date Received: 07/02/24 08:03

Method: SW846 8015M/D - Gasoline Range Organics (GRO) (GC)									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Gasoline Range Organics [C6 - C10]	ND		5.0	mg/Kg		07/02/24 16:14	07/04/24 05:44		1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac	
4-Bromofluorobenzene (Surr)	98		35 - 166			07/02/24 16:14	07/04/24 05:44		1
Method: SW846 8021B - Volatile Organic Compounds (GC)									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Benzene	ND		0.025	mg/Kg		07/02/24 16:14	07/04/24 05:44		1
Ethylbenzene	ND		0.050	mg/Kg		07/02/24 16:14	07/04/24 05:44		1
Toluene	ND		0.050	mg/Kg		07/02/24 16:14	07/04/24 05:44		1
Xylenes, Total	ND		0.10	mg/Kg		07/02/24 16:14	07/04/24 05:44		1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac	
4-Bromofluorobenzene (Surr)	89		48 - 145			07/02/24 16:14	07/04/24 05:44		1
Method: SW846 8015M/D - Diesel Range Organics (DRO) (GC)									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Diesel Range Organics [C10-C28]	180		9.7	mg/Kg		07/03/24 13:32	07/03/24 20:50		1
Motor Oil Range Organics [C28-C40]	130		49	mg/Kg		07/03/24 13:32	07/03/24 20:50		1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac	
Di-n-octyl phthalate (Surr)	83		62 - 134			07/03/24 13:32	07/03/24 20:50		1
Method: EPA 300.0 - Anions, Ion Chromatography									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Chloride	150		60	mg/Kg		07/03/24 15:45	07/05/24 13:47		20

Client Sample Results

Client: Vertex

Job ID: 885-7243-1

Project/Site: Endurance Lariat Water Line

Client Sample ID: BH24-16 2FT

Lab Sample ID: 885-7243-16

Date Collected: 06/28/24 11:40

Matrix: Solid

Date Received: 07/02/24 08:03

Method: SW846 8015M/D - Gasoline Range Organics (GRO) (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics [C6 - C10]	220		24	mg/Kg		07/02/24 16:14	07/04/24 06:06	5
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	222	S1+	35 - 166			07/02/24 16:14	07/04/24 06:06	5

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.12	mg/Kg		07/02/24 16:14	07/04/24 06:06	5
Ethylbenzene	0.39		0.24	mg/Kg		07/02/24 16:14	07/04/24 06:06	5
Toluene	ND		0.24	mg/Kg		07/02/24 16:14	07/04/24 06:06	5
Xylenes, Total	4.9		0.48	mg/Kg		07/02/24 16:14	07/04/24 06:06	5
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	181	S1+	48 - 145			07/02/24 16:14	07/04/24 06:06	5

Method: SW846 8015M/D - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	3200		89	mg/Kg		07/03/24 13:32	07/03/24 21:01	10
Motor Oil Range Organics [C28-C40]	1300		440	mg/Kg		07/03/24 13:32	07/03/24 21:01	10
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
Di-n-octyl phthalate (Surr)	0	S1- D	62 - 134			07/03/24 13:32	07/03/24 21:01	10

Method: EPA 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	2600		150	mg/Kg		07/03/24 15:45	07/08/24 18:43	50

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Client Sample Results

Client: Vertex
Project/Site: Endurance Lariat Water Line

Job ID: 885-7243-1

Client Sample ID: BH24-17 0FT Lab Sample ID: 885-7243-17
Date Collected: 06/28/24 13:00 Matrix: Solid
Date Received: 07/02/24 08:03

Method: SW846 8015M/D - Gasoline Range Organics (GRO) (GC)									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Gasoline Range Organics [C6 - C10]	ND		4.7	mg/Kg		07/02/24 16:14	07/04/24 06:28	1	
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac	
4-Bromofluorobenzene (Surr)	103		35 - 166			07/02/24 16:14	07/04/24 06:28	1	
Method: SW846 8021B - Volatile Organic Compounds (GC)									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Benzene	ND		0.023	mg/Kg		07/02/24 16:14	07/04/24 06:28	1	
Ethylbenzene	ND		0.047	mg/Kg		07/02/24 16:14	07/04/24 06:28	1	
Toluene	ND		0.047	mg/Kg		07/02/24 16:14	07/04/24 06:28	1	
Xylenes, Total	ND		0.094	mg/Kg		07/02/24 16:14	07/04/24 06:28	1	
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac	
4-Bromofluorobenzene (Surr)	92		48 - 145			07/02/24 16:14	07/04/24 06:28	1	
Method: SW846 8015M/D - Diesel Range Organics (DRO) (GC)									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Diesel Range Organics [C10-C28]	15		9.8	mg/Kg		07/03/24 13:32	07/03/24 21:12	1	
Motor Oil Range Organics [C28-C40]	ND		49	mg/Kg		07/03/24 13:32	07/03/24 21:12	1	
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac	
Di-n-octyl phthalate (Surr)	90		62 - 134			07/03/24 13:32	07/03/24 21:12	1	
Method: EPA 300.0 - Anions, Ion Chromatography									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Chloride	ND		60	mg/Kg		07/03/24 15:45	07/05/24 14:12	20	

Client Sample Results

Client: Vertex
Project/Site: Endurance Lariat Water Line

Job ID: 885-7243-1

Client Sample ID: BH24-17 2FT Lab Sample ID: 885-7243-18
Date Collected: 06/28/24 13:10 Matrix: Solid
Date Received: 07/02/24 08:03

Method: SW846 8015M/D - Gasoline Range Organics (GRO) (GC)									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Gasoline Range Organics [C6 - C10]	ND		4.7	mg/Kg		07/02/24 16:14	07/04/24 06:49	1	
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac	
4-Bromofluorobenzene (Surr)	99		35 - 166			07/02/24 16:14	07/04/24 06:49	1	
Method: SW846 8021B - Volatile Organic Compounds (GC)									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Benzene	ND		0.024	mg/Kg		07/02/24 16:14	07/04/24 06:49	1	
Ethylbenzene	ND		0.047	mg/Kg		07/02/24 16:14	07/04/24 06:49	1	
Toluene	ND		0.047	mg/Kg		07/02/24 16:14	07/04/24 06:49	1	
Xylenes, Total	ND		0.094	mg/Kg		07/02/24 16:14	07/04/24 06:49	1	
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac	
4-Bromofluorobenzene (Surr)	93		48 - 145			07/02/24 16:14	07/04/24 06:49	1	
Method: SW846 8015M/D - Diesel Range Organics (DRO) (GC)									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Diesel Range Organics [C10-C28]	ND		10	mg/Kg		07/03/24 13:32	07/03/24 21:23	1	
Motor Oil Range Organics [C28-C40]	ND		50	mg/Kg		07/03/24 13:32	07/03/24 21:23	1	
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac	
Di-n-octyl phthalate (Surr)	90		62 - 134			07/03/24 13:32	07/03/24 21:23	1	
Method: EPA 300.0 - Anions, Ion Chromatography									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Chloride	ND		60	mg/Kg		07/03/24 15:45	07/05/24 14:24	20	

QC Sample Results

Client: Vertex
Project/Site: Endurance Lariat Water Line

Job ID: 885-7243-1

Method: 8015M/D - Gasoline Range Organics (GRO) (GC)

Lab Sample ID: MB 885-7806/1-A						Client Sample ID: Method Blank			
Matrix: Solid						Prep Type: Total/NA			
Analysis Batch: 7936						Prep Batch: 7806			
Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Gasoline Range Organics [C6 - C10]	ND		5.0	mg/Kg		07/02/24 13:17	07/03/24 11:30	1	
Surrogate	MB %Recovery	MB Qualifier	Limits			Prepared	Analyzed	Dil Fac	
4-Bromofluorobenzene (Surr)	92		35 - 166			07/02/24 13:17	07/03/24 11:30	1	

Lab Sample ID: MB 885-7824/1-A						Client Sample ID: Method Blank			
Matrix: Solid						Prep Type: Total/NA			
Analysis Batch: 7936						Prep Batch: 7824			
Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Gasoline Range Organics [C6 - C10]	ND		5.0	mg/Kg		07/02/24 16:14	07/03/24 22:28	1	
Surrogate	MB %Recovery	MB Qualifier	Limits			Prepared	Analyzed	Dil Fac	
4-Bromofluorobenzene (Surr)	98		35 - 166			07/02/24 16:14	07/03/24 22:28	1	

Lab Sample ID: LCS 885-7824/2-A						Client Sample ID: Lab Control Sample			
Matrix: Solid						Prep Type: Total/NA			
Analysis Batch: 7936						Prep Batch: 7824			
Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics [C6 - C10]			25.0	24.9		mg/Kg		100	70 - 130
Surrogate	LCS %Recovery	LCS Qualifier	Limits						
4-Bromofluorobenzene (Surr)	204	S1+	35 - 166						

Lab Sample ID: 885-7243-3 MS						Client Sample ID: BH24-10 0FT			
Matrix: Solid						Prep Type: Total/NA			
Analysis Batch: 7936						Prep Batch: 7824			
Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics [C6 - C10]	ND		25.0	25.7		mg/Kg		103	70 - 130
Surrogate	MS %Recovery	MS Qualifier	Limits						
4-Bromofluorobenzene (Surr)	219	S1+	35 - 166						

Lab Sample ID: 885-7243-3 MSD							Client Sample ID: BH24-10 0FT				
Matrix: Solid							Prep Type: Total/NA				
Analysis Batch: 7936							Prep Batch: 7824				
Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics [C6 - C10]	ND		24.8	23.4		mg/Kg		94	70 - 130	10	20
Surrogate	MSD %Recovery	MSD Qualifier	Limits								
4-Bromofluorobenzene (Surr)	208	S1+	35 - 166								

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QC Sample Results

Client: Vertex
Project/Site: Endurance Lariat Water Line

Job ID: 885-7243-1

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 885-7806/1-A						Client Sample ID: Method Blank			
Matrix: Solid						Prep Type: Total/NA			
Analysis Batch: 7937						Prep Batch: 7806			
	MB	MB							
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Benzene	ND		0.025	mg/Kg		07/02/24 13:17	07/03/24 11:30		1
Ethylbenzene	ND		0.050	mg/Kg		07/02/24 13:17	07/03/24 11:30		1
Toluene	ND		0.050	mg/Kg		07/02/24 13:17	07/03/24 11:30		1
Xylenes, Total	ND		0.10	mg/Kg		07/02/24 13:17	07/03/24 11:30		1
	MB	MB							
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac	
4-Bromofluorobenzene (Surr)	91		48 - 145			07/02/24 13:17	07/03/24 11:30		1

Lab Sample ID: MB 885-7824/1-A						Client Sample ID: Method Blank			
Matrix: Solid						Prep Type: Total/NA			
Analysis Batch: 7937						Prep Batch: 7824			
	MB	MB							
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Benzene	ND		0.025	mg/Kg		07/02/24 16:14	07/03/24 22:28		1
Ethylbenzene	ND		0.050	mg/Kg		07/02/24 16:14	07/03/24 22:28		1
Toluene	ND		0.050	mg/Kg		07/02/24 16:14	07/03/24 22:28		1
Xylenes, Total	ND		0.10	mg/Kg		07/02/24 16:14	07/03/24 22:28		1
	MB	MB							
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac	
4-Bromofluorobenzene (Surr)	93		48 - 145			07/02/24 16:14	07/03/24 22:28		1

Lab Sample ID: LCS 885-7824/3-A						Client Sample ID: Lab Control Sample			
Matrix: Solid						Prep Type: Total/NA			
Analysis Batch: 7937						Prep Batch: 7824			
Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene			1.00	0.962		mg/Kg		96	70 - 130
Ethylbenzene			1.00	0.956		mg/Kg		96	70 - 130
m,p-Xylene			2.00	1.90		mg/Kg		95	70 - 130
o-Xylene			1.00	0.954		mg/Kg		95	70 - 130
Toluene			1.00	0.949		mg/Kg		95	70 - 130
Surrogate	LCS %Recovery	LCS Qualifier	Limits						
4-Bromofluorobenzene (Surr)	93		48 - 145						

Lab Sample ID: 885-7243-4 MS						Client Sample ID: BH24-10 2FT			
Matrix: Solid						Prep Type: Total/NA			
Analysis Batch: 7937						Prep Batch: 7824			
Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	ND		0.994	0.924		mg/Kg		93	70 - 130
Ethylbenzene	ND		0.994	0.925		mg/Kg		93	70 - 130
m,p-Xylene	ND		1.99	1.85		mg/Kg		93	70 - 130
o-Xylene	ND		0.994	0.934		mg/Kg		94	70 - 130
Toluene	ND		0.994	0.908		mg/Kg		91	70 - 130

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QC Sample Results

Client: Vertex

Job ID: 885-7243-1

Project/Site: Endurance Lariat Water Line

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

Lab Sample ID: 885-7243-4 MS

Matrix: Solid

Analysis Batch: 7937

Client Sample ID: BH24-10 2FT

Prep Type: Total/NA

Prep Batch: 7824

	MS	MS	
Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	90		48 - 145

Lab Sample ID: 885-7243-4 MSD

Matrix: Solid

Analysis Batch: 7937

Client Sample ID: BH24-10 2FT

Prep Type: Total/NA

Prep Batch: 7824

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	ND		0.998	0.980		mg/Kg		98	70 - 130	6	20
Ethylbenzene	ND		0.998	1.01		mg/Kg		101	70 - 130	8	20
m,p-Xylene	ND		2.00	2.00		mg/Kg		100	70 - 130	8	20
o-Xylene	ND		0.998	1.01		mg/Kg		101	70 - 130	7	20
Toluene	ND		0.998	0.987		mg/Kg		99	70 - 130	8	20

	MSD	MSD	
Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	93		48 - 145

Method: 8015M/D - Diesel Range Organics (DRO) (GC)

Lab Sample ID: MB 885-7882/1-A

Matrix: Solid

Analysis Batch: 7876

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 7882

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		10	mg/Kg		07/03/24 13:32	07/03/24 17:39	1
Motor Oil Range Organics [C28-C40]	ND		50	mg/Kg		07/03/24 13:32	07/03/24 17:39	1

	MB	MB						
Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac		
Di-n-octyl phthalate (Surr)	85		62 - 134	07/03/24 13:32	07/03/24 17:39	1		

Lab Sample ID: LCS 885-7882/2-A

Matrix: Solid

Analysis Batch: 7876

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 7882

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Diesel Range Organics [C10-C28]	50.0	44.6		mg/Kg		89	60 - 135

	LCS	LCS	
Surrogate	%Recovery	Qualifier	Limits
Di-n-octyl phthalate (Surr)	87		62 - 134

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 885-7888/1-A

Matrix: Solid

Analysis Batch: 8024

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 7888

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		3.0	mg/Kg		07/03/24 15:45	07/05/24 08:48	1

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QC Sample Results

Client: Vertex

Job ID: 885-7243-1

Project/Site: Endurance Lariat Water Line

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: LCS 885-7888/2-A

Matrix: Solid

Analysis Batch: 8024

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 7888

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	30.0	27.9		mg/Kg		93	90 - 110

Lab Sample ID: 885-7243-1 MS

Matrix: Solid

Analysis Batch: 8024

Client Sample ID: BH24-09 0FT

Prep Type: Total/NA

Prep Batch: 7888

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	260	F2	29.9	438	4	mg/Kg		598	50 - 150

Lab Sample ID: 885-7243-1 MSD

Matrix: Solid

Analysis Batch: 8024

Client Sample ID: BH24-09 0FT

Prep Type: Total/NA

Prep Batch: 7888

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	260	F2	29.9	329	4 F2	mg/Kg		232	50 - 150	28	20

Lab Sample ID: 885-7243-4 MS

Matrix: Solid

Analysis Batch: 8024

Client Sample ID: BH24-10 2FT

Prep Type: Total/NA

Prep Batch: 7888

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	ND		30.2	ND		mg/Kg		NC	50 - 150

Lab Sample ID: 885-7243-4 MSD

Matrix: Solid

Analysis Batch: 8024

Client Sample ID: BH24-10 2FT

Prep Type: Total/NA

Prep Batch: 7888

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	ND		30.3	ND		mg/Kg		NC	50 - 150	NC	20

Lab Sample ID: MB 885-8025/1-A

Matrix: Solid

Analysis Batch: 8052

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 8025

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		3.0	mg/Kg		07/08/24 12:29	07/08/24 15:56	1

Lab Sample ID: LCS 885-8025/2-A

Matrix: Solid

Analysis Batch: 8052

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 8025

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	30.0	31.0		mg/Kg		103	90 - 110

Lab Sample ID: MRL 885-8025/20-A

Matrix: Solid

Analysis Batch: 8052

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 8025

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	3.00	3.40		mg/L		113	50 - 150

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QC Association Summary

Client: Vertex

Job ID: 885-7243-1

Project/Site: Endurance Lariat Water Line

GC VOA

Prep Batch: 7806

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 885-7806/1-A	Method Blank	Total/NA	Solid	5030C	

Prep Batch: 7824

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-7243-1	BH24-09 0FT	Total/NA	Solid	5030C	
885-7243-2	BH24-09 2FT	Total/NA	Solid	5030C	
885-7243-3	BH24-10 0FT	Total/NA	Solid	5030C	
885-7243-4	BH24-10 2FT	Total/NA	Solid	5030C	
885-7243-5	BH24-11 0FT	Total/NA	Solid	5030C	
885-7243-6	BH24-11 2FT	Total/NA	Solid	5030C	
885-7243-7	BH24-12 0FT	Total/NA	Solid	5030C	
885-7243-8	BH24-12 2FT	Total/NA	Solid	5030C	
885-7243-9	BH24-13 0FT	Total/NA	Solid	5030C	
885-7243-10	BH24-13 2FT	Total/NA	Solid	5030C	
885-7243-11	BH24-14 0FT	Total/NA	Solid	5030C	
885-7243-12	BH24-14 2FT	Total/NA	Solid	5030C	
885-7243-13	BH24-15 0FT	Total/NA	Solid	5030C	
885-7243-14	BH24-15 2FT	Total/NA	Solid	5030C	
885-7243-15	BH24-16 0FT	Total/NA	Solid	5030C	
885-7243-16	BH24-16 2FT	Total/NA	Solid	5030C	
885-7243-17	BH24-17 0FT	Total/NA	Solid	5030C	
885-7243-18	BH24-17 2FT	Total/NA	Solid	5030C	
MB 885-7824/1-A	Method Blank	Total/NA	Solid	5030C	
LCS 885-7824/2-A	Lab Control Sample	Total/NA	Solid	5030C	
LCS 885-7824/3-A	Lab Control Sample	Total/NA	Solid	5030C	
885-7243-3 MS	BH24-10 0FT	Total/NA	Solid	5030C	
885-7243-3 MSD	BH24-10 0FT	Total/NA	Solid	5030C	
885-7243-4 MS	BH24-10 2FT	Total/NA	Solid	5030C	
885-7243-4 MSD	BH24-10 2FT	Total/NA	Solid	5030C	

Analysis Batch: 7936

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-7243-1	BH24-09 0FT	Total/NA	Solid	8015M/D	7824
885-7243-2	BH24-09 2FT	Total/NA	Solid	8015M/D	7824
885-7243-3	BH24-10 0FT	Total/NA	Solid	8015M/D	7824
885-7243-4	BH24-10 2FT	Total/NA	Solid	8015M/D	7824
885-7243-5	BH24-11 0FT	Total/NA	Solid	8015M/D	7824
885-7243-6	BH24-11 2FT	Total/NA	Solid	8015M/D	7824
885-7243-7	BH24-12 0FT	Total/NA	Solid	8015M/D	7824
885-7243-8	BH24-12 2FT	Total/NA	Solid	8015M/D	7824
885-7243-9	BH24-13 0FT	Total/NA	Solid	8015M/D	7824
885-7243-10	BH24-13 2FT	Total/NA	Solid	8015M/D	7824
885-7243-11	BH24-14 0FT	Total/NA	Solid	8015M/D	7824
885-7243-12	BH24-14 2FT	Total/NA	Solid	8015M/D	7824
885-7243-13	BH24-15 0FT	Total/NA	Solid	8015M/D	7824
885-7243-14	BH24-15 2FT	Total/NA	Solid	8015M/D	7824
885-7243-15	BH24-16 0FT	Total/NA	Solid	8015M/D	7824
885-7243-16	BH24-16 2FT	Total/NA	Solid	8015M/D	7824
885-7243-17	BH24-17 0FT	Total/NA	Solid	8015M/D	7824
885-7243-18	BH24-17 2FT	Total/NA	Solid	8015M/D	7824
MB 885-7806/1-A	Method Blank	Total/NA	Solid	8015M/D	7806

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QC Association Summary

Client: Vertex
Project/Site: Endurance Lariat Water Line

Job ID: 885-7243-1

GC VOA (Continued)

Analysis Batch: 7936 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 885-7824/1-A	Method Blank	Total/NA	Solid	8015M/D	7824
LCS 885-7824/2-A	Lab Control Sample	Total/NA	Solid	8015M/D	7824
885-7243-3 MS	BH24-10 0FT	Total/NA	Solid	8015M/D	7824
885-7243-3 MSD	BH24-10 0FT	Total/NA	Solid	8015M/D	7824

Analysis Batch: 7937

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-7243-1	BH24-09 0FT	Total/NA	Solid	8021B	7824
885-7243-2	BH24-09 2FT	Total/NA	Solid	8021B	7824
885-7243-3	BH24-10 0FT	Total/NA	Solid	8021B	7824
885-7243-4	BH24-10 2FT	Total/NA	Solid	8021B	7824
885-7243-5	BH24-11 0FT	Total/NA	Solid	8021B	7824
885-7243-6	BH24-11 2FT	Total/NA	Solid	8021B	7824
885-7243-7	BH24-12 0FT	Total/NA	Solid	8021B	7824
885-7243-8	BH24-12 2FT	Total/NA	Solid	8021B	7824
885-7243-9	BH24-13 0FT	Total/NA	Solid	8021B	7824
885-7243-10	BH24-13 2FT	Total/NA	Solid	8021B	7824
885-7243-11	BH24-14 0FT	Total/NA	Solid	8021B	7824
885-7243-12	BH24-14 2FT	Total/NA	Solid	8021B	7824
885-7243-13	BH24-15 0FT	Total/NA	Solid	8021B	7824
885-7243-14	BH24-15 2FT	Total/NA	Solid	8021B	7824
885-7243-15	BH24-16 0FT	Total/NA	Solid	8021B	7824
885-7243-16	BH24-16 2FT	Total/NA	Solid	8021B	7824
885-7243-17	BH24-17 0FT	Total/NA	Solid	8021B	7824
885-7243-18	BH24-17 2FT	Total/NA	Solid	8021B	7824
MB 885-7806/1-A	Method Blank	Total/NA	Solid	8021B	7806
MB 885-7824/1-A	Method Blank	Total/NA	Solid	8021B	7824
LCS 885-7824/3-A	Lab Control Sample	Total/NA	Solid	8021B	7824
885-7243-4 MS	BH24-10 2FT	Total/NA	Solid	8021B	7824
885-7243-4 MSD	BH24-10 2FT	Total/NA	Solid	8021B	7824

GC Semi VOA

Analysis Batch: 7876

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-7243-1	BH24-09 0FT	Total/NA	Solid	8015M/D	7882
885-7243-2	BH24-09 2FT	Total/NA	Solid	8015M/D	7882
885-7243-3	BH24-10 0FT	Total/NA	Solid	8015M/D	7882
885-7243-4	BH24-10 2FT	Total/NA	Solid	8015M/D	7882
885-7243-6	BH24-11 2FT	Total/NA	Solid	8015M/D	7882
885-7243-7	BH24-12 0FT	Total/NA	Solid	8015M/D	7882
885-7243-8	BH24-12 2FT	Total/NA	Solid	8015M/D	7882
885-7243-9	BH24-13 0FT	Total/NA	Solid	8015M/D	7882
885-7243-10	BH24-13 2FT	Total/NA	Solid	8015M/D	7882
885-7243-11	BH24-14 0FT	Total/NA	Solid	8015M/D	7882
885-7243-12	BH24-14 2FT	Total/NA	Solid	8015M/D	7882
885-7243-13	BH24-15 0FT	Total/NA	Solid	8015M/D	7882
885-7243-14	BH24-15 2FT	Total/NA	Solid	8015M/D	7882
885-7243-15	BH24-16 0FT	Total/NA	Solid	8015M/D	7882
885-7243-16	BH24-16 2FT	Total/NA	Solid	8015M/D	7882
885-7243-17	BH24-17 0FT	Total/NA	Solid	8015M/D	7882

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QC Association Summary

Client: Vertex

Job ID: 885-7243-1

Project/Site: Endurance Lariat Water Line

GC Semi VOA (Continued)

Analysis Batch: 7876 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-7243-18	BH24-17 2FT	Total/NA	Solid	8015M/D	7882
MB 885-7882/1-A	Method Blank	Total/NA	Solid	8015M/D	7882
LCS 885-7882/2-A	Lab Control Sample	Total/NA	Solid	8015M/D	7882

Prep Batch: 7882

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-7243-1	BH24-09 0FT	Total/NA	Solid	SHAKE	
885-7243-2	BH24-09 2FT	Total/NA	Solid	SHAKE	
885-7243-3	BH24-10 0FT	Total/NA	Solid	SHAKE	
885-7243-4	BH24-10 2FT	Total/NA	Solid	SHAKE	
885-7243-5	BH24-11 0FT	Total/NA	Solid	SHAKE	
885-7243-6	BH24-11 2FT	Total/NA	Solid	SHAKE	
885-7243-7	BH24-12 0FT	Total/NA	Solid	SHAKE	
885-7243-8	BH24-12 2FT	Total/NA	Solid	SHAKE	
885-7243-9	BH24-13 0FT	Total/NA	Solid	SHAKE	
885-7243-10	BH24-13 2FT	Total/NA	Solid	SHAKE	
885-7243-11	BH24-14 0FT	Total/NA	Solid	SHAKE	
885-7243-12	BH24-14 2FT	Total/NA	Solid	SHAKE	
885-7243-13	BH24-15 0FT	Total/NA	Solid	SHAKE	
885-7243-14	BH24-15 2FT	Total/NA	Solid	SHAKE	
885-7243-15	BH24-16 0FT	Total/NA	Solid	SHAKE	
885-7243-16	BH24-16 2FT	Total/NA	Solid	SHAKE	
885-7243-17	BH24-17 0FT	Total/NA	Solid	SHAKE	
885-7243-18	BH24-17 2FT	Total/NA	Solid	SHAKE	
MB 885-7882/1-A	Method Blank	Total/NA	Solid	SHAKE	
LCS 885-7882/2-A	Lab Control Sample	Total/NA	Solid	SHAKE	

Analysis Batch: 7953

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-7243-5	BH24-11 0FT	Total/NA	Solid	8015M/D	7882

HPLC/IC

Prep Batch: 7888

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-7243-1	BH24-09 0FT	Total/NA	Solid	300_Prep	
885-7243-2	BH24-09 2FT	Total/NA	Solid	300_Prep	
885-7243-3	BH24-10 0FT	Total/NA	Solid	300_Prep	
885-7243-4	BH24-10 2FT	Total/NA	Solid	300_Prep	
885-7243-5	BH24-11 0FT	Total/NA	Solid	300_Prep	
885-7243-6	BH24-11 2FT	Total/NA	Solid	300_Prep	
885-7243-7	BH24-12 0FT	Total/NA	Solid	300_Prep	
885-7243-8	BH24-12 2FT	Total/NA	Solid	300_Prep	
885-7243-9	BH24-13 0FT	Total/NA	Solid	300_Prep	
885-7243-10	BH24-13 2FT	Total/NA	Solid	300_Prep	
885-7243-11	BH24-14 0FT	Total/NA	Solid	300_Prep	
885-7243-12	BH24-14 2FT	Total/NA	Solid	300_Prep	
885-7243-13	BH24-15 0FT	Total/NA	Solid	300_Prep	
885-7243-14	BH24-15 2FT	Total/NA	Solid	300_Prep	
885-7243-15	BH24-16 0FT	Total/NA	Solid	300_Prep	
885-7243-16	BH24-16 2FT	Total/NA	Solid	300_Prep	

Eurofins Albuquerque

QC Association Summary

Client: Vertex

Job ID: 885-7243-1

Project/Site: Endurance Lariat Water Line

HPLC/IC (Continued)

Prep Batch: 7888 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-7243-17	BH24-17 0FT	Total/NA	Solid	300_Prep	
885-7243-18	BH24-17 2FT	Total/NA	Solid	300_Prep	
MB 885-7888/1-A	Method Blank	Total/NA	Solid	300_Prep	
LCS 885-7888/2-A	Lab Control Sample	Total/NA	Solid	300_Prep	
885-7243-1 MS	BH24-09 0FT	Total/NA	Solid	300_Prep	
885-7243-1 MSD	BH24-09 0FT	Total/NA	Solid	300_Prep	
885-7243-4 MS	BH24-10 2FT	Total/NA	Solid	300_Prep	
885-7243-4 MSD	BH24-10 2FT	Total/NA	Solid	300_Prep	

Analysis Batch: 8024

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-7243-1	BH24-09 0FT	Total/NA	Solid	300.0	7888
885-7243-2	BH24-09 2FT	Total/NA	Solid	300.0	7888
885-7243-3	BH24-10 0FT	Total/NA	Solid	300.0	7888
885-7243-4	BH24-10 2FT	Total/NA	Solid	300.0	7888
885-7243-5	BH24-11 0FT	Total/NA	Solid	300.0	7888
885-7243-6	BH24-11 2FT	Total/NA	Solid	300.0	7888
885-7243-7	BH24-12 0FT	Total/NA	Solid	300.0	7888
885-7243-8	BH24-12 2FT	Total/NA	Solid	300.0	7888
885-7243-9	BH24-13 0FT	Total/NA	Solid	300.0	7888
885-7243-11	BH24-14 0FT	Total/NA	Solid	300.0	7888
885-7243-12	BH24-14 2FT	Total/NA	Solid	300.0	7888
885-7243-13	BH24-15 0FT	Total/NA	Solid	300.0	7888
885-7243-15	BH24-16 0FT	Total/NA	Solid	300.0	7888
885-7243-17	BH24-17 0FT	Total/NA	Solid	300.0	7888
885-7243-18	BH24-17 2FT	Total/NA	Solid	300.0	7888
MB 885-7888/1-A	Method Blank	Total/NA	Solid	300.0	7888
LCS 885-7888/2-A	Lab Control Sample	Total/NA	Solid	300.0	7888
885-7243-1 MS	BH24-09 0FT	Total/NA	Solid	300.0	7888
885-7243-1 MSD	BH24-09 0FT	Total/NA	Solid	300.0	7888
885-7243-4 MS	BH24-10 2FT	Total/NA	Solid	300.0	7888
885-7243-4 MSD	BH24-10 2FT	Total/NA	Solid	300.0	7888

Prep Batch: 8025

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 885-8025/1-A	Method Blank	Total/NA	Solid	300_Prep	
LCS 885-8025/2-A	Lab Control Sample	Total/NA	Solid	300_Prep	
MRL 885-8025/20-A	Lab Control Sample	Total/NA	Solid	300_Prep	

Analysis Batch: 8052

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-7243-10	BH24-13 2FT	Total/NA	Solid	300.0	7888
885-7243-14	BH24-15 2FT	Total/NA	Solid	300.0	7888
885-7243-16	BH24-16 2FT	Total/NA	Solid	300.0	7888
MB 885-8025/1-A	Method Blank	Total/NA	Solid	300.0	8025
LCS 885-8025/2-A	Lab Control Sample	Total/NA	Solid	300.0	8025
MRL 885-8025/20-A	Lab Control Sample	Total/NA	Solid	300.0	8025

Eurofins Albuquerque

Lab Chronicle

Client: Vertex
Project/Site: Endurance Lariat Water Line

Job ID: 885-7243-1

Client Sample ID: BH24-09 0FT
Date Collected: 06/28/24 08:00
Date Received: 07/02/24 08:03

Lab Sample ID: 885-7243-1
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			7824	AT	EET ALB	07/02/24 16:14
Total/NA	Analysis	8015M/D		1	7936	AT	EET ALB	07/03/24 22:49
Total/NA	Prep	5030C			7824	AT	EET ALB	07/02/24 16:14
Total/NA	Analysis	8021B		1	7937	AT	EET ALB	07/03/24 22:49
Total/NA	Prep	SHAKE			7882	KR	EET ALB	07/03/24 13:32
Total/NA	Analysis	8015M/D		10	7876	PD	EET ALB	07/03/24 18:01
Total/NA	Prep	300_Prep			7888	RC	EET ALB	07/03/24 15:45
Total/NA	Analysis	300.0		20	8024	JT	EET ALB	07/05/24 09:15

Client Sample ID: BH24-09 2FT
Date Collected: 06/28/24 08:10
Date Received: 07/02/24 08:03

Lab Sample ID: 885-7243-2
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			7824	AT	EET ALB	07/02/24 16:14
Total/NA	Analysis	8015M/D		1	7936	AT	EET ALB	07/03/24 23:11
Total/NA	Prep	5030C			7824	AT	EET ALB	07/02/24 16:14
Total/NA	Analysis	8021B		1	7937	AT	EET ALB	07/03/24 23:11
Total/NA	Prep	SHAKE			7882	KR	EET ALB	07/03/24 13:32
Total/NA	Analysis	8015M/D		10	7876	PD	EET ALB	07/03/24 18:13
Total/NA	Prep	300_Prep			7888	RC	EET ALB	07/03/24 15:45
Total/NA	Analysis	300.0		20	8024	JT	EET ALB	07/05/24 09:52

Client Sample ID: BH24-10 0FT
Date Collected: 06/28/24 08:30
Date Received: 07/02/24 08:03

Lab Sample ID: 885-7243-3
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			7824	AT	EET ALB	07/02/24 16:14
Total/NA	Analysis	8015M/D		1	7936	AT	EET ALB	07/03/24 23:33
Total/NA	Prep	5030C			7824	AT	EET ALB	07/02/24 16:14
Total/NA	Analysis	8021B		1	7937	AT	EET ALB	07/03/24 23:33
Total/NA	Prep	SHAKE			7882	KR	EET ALB	07/03/24 13:32
Total/NA	Analysis	8015M/D		1	7876	PD	EET ALB	07/03/24 18:24
Total/NA	Prep	300_Prep			7888	RC	EET ALB	07/03/24 15:45
Total/NA	Analysis	300.0		20	8024	JT	EET ALB	07/05/24 10:05

Client Sample ID: BH24-10 2FT
Date Collected: 06/28/24 08:40
Date Received: 07/02/24 08:03

Lab Sample ID: 885-7243-4
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			7824	AT	EET ALB	07/02/24 16:14
Total/NA	Analysis	8015M/D		1	7936	AT	EET ALB	07/04/24 00:39

Eurofins Albuquerque

Lab Chronicle

Client: Vertex
Project/Site: Endurance Lariat Water Line

Job ID: 885-7243-1

Client Sample ID: BH24-10 2FT
Date Collected: 06/28/24 08:40
Date Received: 07/02/24 08:03

Lab Sample ID: 885-7243-4
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			7824	AT	EET ALB	07/02/24 16:14
Total/NA	Analysis	8021B		1	7937	AT	EET ALB	07/04/24 00:39
Total/NA	Prep	SHAKE			7882	KR	EET ALB	07/03/24 13:32
Total/NA	Analysis	8015M/D		1	7876	PD	EET ALB	07/03/24 18:36
Total/NA	Prep	300_Prep			7888	RC	EET ALB	07/03/24 15:45
Total/NA	Analysis	300.0		20	8024	JT	EET ALB	07/05/24 10:17

Client Sample ID: BH24-11 0FT
Date Collected: 06/28/24 09:00
Date Received: 07/02/24 08:03

Lab Sample ID: 885-7243-5
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			7824	AT	EET ALB	07/02/24 16:14
Total/NA	Analysis	8015M/D		1	7936	AT	EET ALB	07/04/24 01:44
Total/NA	Prep	5030C			7824	AT	EET ALB	07/02/24 16:14
Total/NA	Analysis	8021B		1	7937	AT	EET ALB	07/04/24 01:44
Total/NA	Prep	SHAKE			7882	KR	EET ALB	07/03/24 13:32
Total/NA	Analysis	8015M/D		5	7953	DH	EET ALB	07/05/24 15:34
Total/NA	Prep	300_Prep			7888	RC	EET ALB	07/03/24 15:45
Total/NA	Analysis	300.0		20	8024	JT	EET ALB	07/05/24 11:19

Client Sample ID: BH24-11 2FT
Date Collected: 06/28/24 09:10
Date Received: 07/02/24 08:03

Lab Sample ID: 885-7243-6
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			7824	AT	EET ALB	07/02/24 16:14
Total/NA	Analysis	8015M/D		1	7936	AT	EET ALB	07/04/24 02:06
Total/NA	Prep	5030C			7824	AT	EET ALB	07/02/24 16:14
Total/NA	Analysis	8021B		1	7937	AT	EET ALB	07/04/24 02:06
Total/NA	Prep	SHAKE			7882	KR	EET ALB	07/03/24 13:32
Total/NA	Analysis	8015M/D		1	7876	PD	EET ALB	07/03/24 18:58
Total/NA	Prep	300_Prep			7888	RC	EET ALB	07/03/24 15:45
Total/NA	Analysis	300.0		20	8024	JT	EET ALB	07/05/24 11:31

Client Sample ID: BH24-12 0FT
Date Collected: 06/28/24 09:30
Date Received: 07/02/24 08:03

Lab Sample ID: 885-7243-7
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			7824	AT	EET ALB	07/02/24 16:14
Total/NA	Analysis	8015M/D		1	7936	AT	EET ALB	07/04/24 02:28
Total/NA	Prep	5030C			7824	AT	EET ALB	07/02/24 16:14
Total/NA	Analysis	8021B		1	7937	AT	EET ALB	07/04/24 02:28

Eurofins Albuquerque

Lab Chronicle

Client: Vertex
Project/Site: Endurance Lariat Water Line

Job ID: 885-7243-1

Client Sample ID: BH24-12 0FT
Date Collected: 06/28/24 09:30
Date Received: 07/02/24 08:03

Lab Sample ID: 885-7243-7
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	SHAKE			7882	KR	EET ALB	07/03/24 13:32
Total/NA	Analysis	8015M/D		1	7876	PD	EET ALB	07/03/24 19:10
Total/NA	Prep	300_Prep			7888	RC	EET ALB	07/03/24 15:45
Total/NA	Analysis	300.0		20	8024	JT	EET ALB	07/05/24 11:44

Client Sample ID: BH24-12 2FT
Date Collected: 06/28/24 09:40
Date Received: 07/02/24 08:03

Lab Sample ID: 885-7243-8
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			7824	AT	EET ALB	07/02/24 16:14
Total/NA	Analysis	8015M/D		5	7936	AT	EET ALB	07/04/24 02:49
Total/NA	Prep	5030C			7824	AT	EET ALB	07/02/24 16:14
Total/NA	Analysis	8021B		5	7937	AT	EET ALB	07/04/24 02:49
Total/NA	Prep	SHAKE			7882	KR	EET ALB	07/03/24 13:32
Total/NA	Analysis	8015M/D		10	7876	PD	EET ALB	07/03/24 19:21
Total/NA	Prep	300_Prep			7888	RC	EET ALB	07/03/24 15:45
Total/NA	Analysis	300.0		20	8024	JT	EET ALB	07/05/24 11:56

Client Sample ID: BH24-13 0FT
Date Collected: 06/28/24 10:00
Date Received: 07/02/24 08:03

Lab Sample ID: 885-7243-9
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			7824	AT	EET ALB	07/02/24 16:14
Total/NA	Analysis	8015M/D		1	7936	AT	EET ALB	07/04/24 03:11
Total/NA	Prep	5030C			7824	AT	EET ALB	07/02/24 16:14
Total/NA	Analysis	8021B		1	7937	AT	EET ALB	07/04/24 03:11
Total/NA	Prep	SHAKE			7882	KR	EET ALB	07/03/24 13:32
Total/NA	Analysis	8015M/D		1	7876	PD	EET ALB	07/03/24 19:43
Total/NA	Prep	300_Prep			7888	RC	EET ALB	07/03/24 15:45
Total/NA	Analysis	300.0		20	8024	JT	EET ALB	07/05/24 12:08

Client Sample ID: BH24-13 2FT
Date Collected: 06/28/24 10:10
Date Received: 07/02/24 08:03

Lab Sample ID: 885-7243-10
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			7824	AT	EET ALB	07/02/24 16:14
Total/NA	Analysis	8015M/D		1	7936	AT	EET ALB	07/04/24 03:33
Total/NA	Prep	5030C			7824	AT	EET ALB	07/02/24 16:14
Total/NA	Analysis	8021B		1	7937	AT	EET ALB	07/04/24 03:33
Total/NA	Prep	SHAKE			7882	KR	EET ALB	07/03/24 13:32
Total/NA	Analysis	8015M/D		1	7876	PD	EET ALB	07/03/24 19:55

Eurofins Albuquerque

Lab Chronicle

Client: Vertex
Project/Site: Endurance Lariat Water Line

Job ID: 885-7243-1

Client Sample ID: BH24-13 2FT

Lab Sample ID: 885-7243-10

Date Collected: 06/28/24 10:10

Matrix: Solid

Date Received: 07/02/24 08:03

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	300_Prep			7888	RC	EET ALB	07/03/24 15:45
Total/NA	Analysis	300.0		50	8052	JT	EET ALB	07/08/24 18:05

Client Sample ID: BH24-14 0FT

Lab Sample ID: 885-7243-11

Date Collected: 06/28/24 10:30

Matrix: Solid

Date Received: 07/02/24 08:03

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			7824	AT	EET ALB	07/02/24 16:14
Total/NA	Analysis	8015M/D		1	7936	AT	EET ALB	07/04/24 04:17
Total/NA	Prep	5030C			7824	AT	EET ALB	07/02/24 16:14
Total/NA	Analysis	8021B		1	7937	AT	EET ALB	07/04/24 04:17
Total/NA	Prep	SHAKE			7882	KR	EET ALB	07/03/24 13:32
Total/NA	Analysis	8015M/D		1	7876	PD	EET ALB	07/03/24 20:06
Total/NA	Prep	300_Prep			7888	RC	EET ALB	07/03/24 15:45
Total/NA	Analysis	300.0		20	8024	JT	EET ALB	07/05/24 12:33

Client Sample ID: BH24-14 2FT

Lab Sample ID: 885-7243-12

Date Collected: 06/28/24 10:40

Matrix: Solid

Date Received: 07/02/24 08:03

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			7824	AT	EET ALB	07/02/24 16:14
Total/NA	Analysis	8015M/D		1	7936	AT	EET ALB	07/04/24 04:38
Total/NA	Prep	5030C			7824	AT	EET ALB	07/02/24 16:14
Total/NA	Analysis	8021B		1	7937	AT	EET ALB	07/04/24 04:38
Total/NA	Prep	SHAKE			7882	KR	EET ALB	07/03/24 13:32
Total/NA	Analysis	8015M/D		1	7876	PD	EET ALB	07/03/24 20:17
Total/NA	Prep	300_Prep			7888	RC	EET ALB	07/03/24 15:45
Total/NA	Analysis	300.0		20	8024	JT	EET ALB	07/05/24 12:45

Client Sample ID: BH24-15 0FT

Lab Sample ID: 885-7243-13

Date Collected: 06/28/24 11:00

Matrix: Solid

Date Received: 07/02/24 08:03

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			7824	AT	EET ALB	07/02/24 16:14
Total/NA	Analysis	8015M/D		1	7936	AT	EET ALB	07/04/24 05:00
Total/NA	Prep	5030C			7824	AT	EET ALB	07/02/24 16:14
Total/NA	Analysis	8021B		1	7937	AT	EET ALB	07/04/24 05:00
Total/NA	Prep	SHAKE			7882	KR	EET ALB	07/03/24 13:32
Total/NA	Analysis	8015M/D		1	7876	PD	EET ALB	07/03/24 20:28
Total/NA	Prep	300_Prep			7888	RC	EET ALB	07/03/24 15:45
Total/NA	Analysis	300.0		20	8024	JT	EET ALB	07/05/24 12:58

Eurofins Albuquerque

Lab Chronicle

Client: Vertex
Project/Site: Endurance Lariat Water Line

Job ID: 885-7243-1

Client Sample ID: BH24-15 2FT
Date Collected: 06/28/24 11:10
Date Received: 07/02/24 08:03

Lab Sample ID: 885-7243-14
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			7824	AT	EET ALB	07/02/24 16:14
Total/NA	Analysis	8015M/D		1	7936	AT	EET ALB	07/04/24 05:22
Total/NA	Prep	5030C			7824	AT	EET ALB	07/02/24 16:14
Total/NA	Analysis	8021B		1	7937	AT	EET ALB	07/04/24 05:22
Total/NA	Prep	SHAKE			7882	KR	EET ALB	07/03/24 13:32
Total/NA	Analysis	8015M/D		1	7876	PD	EET ALB	07/03/24 20:39
Total/NA	Prep	300_Prep			7888	RC	EET ALB	07/03/24 15:45
Total/NA	Analysis	300.0		50	8052	JT	EET ALB	07/08/24 18:30

Client Sample ID: BH24-16 0FT
Date Collected: 06/28/24 11:30
Date Received: 07/02/24 08:03

Lab Sample ID: 885-7243-15
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			7824	AT	EET ALB	07/02/24 16:14
Total/NA	Analysis	8015M/D		1	7936	AT	EET ALB	07/04/24 05:44
Total/NA	Prep	5030C			7824	AT	EET ALB	07/02/24 16:14
Total/NA	Analysis	8021B		1	7937	AT	EET ALB	07/04/24 05:44
Total/NA	Prep	SHAKE			7882	KR	EET ALB	07/03/24 13:32
Total/NA	Analysis	8015M/D		1	7876	PD	EET ALB	07/03/24 20:50
Total/NA	Prep	300_Prep			7888	RC	EET ALB	07/03/24 15:45
Total/NA	Analysis	300.0		20	8024	JT	EET ALB	07/05/24 13:47

Client Sample ID: BH24-16 2FT
Date Collected: 06/28/24 11:40
Date Received: 07/02/24 08:03

Lab Sample ID: 885-7243-16
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			7824	AT	EET ALB	07/02/24 16:14
Total/NA	Analysis	8015M/D		5	7936	AT	EET ALB	07/04/24 06:06
Total/NA	Prep	5030C			7824	AT	EET ALB	07/02/24 16:14
Total/NA	Analysis	8021B		5	7937	AT	EET ALB	07/04/24 06:06
Total/NA	Prep	SHAKE			7882	KR	EET ALB	07/03/24 13:32
Total/NA	Analysis	8015M/D		10	7876	PD	EET ALB	07/03/24 21:01
Total/NA	Prep	300_Prep			7888	RC	EET ALB	07/03/24 15:45
Total/NA	Analysis	300.0		50	8052	JT	EET ALB	07/08/24 18:43

Client Sample ID: BH24-17 0FT
Date Collected: 06/28/24 13:00
Date Received: 07/02/24 08:03

Lab Sample ID: 885-7243-17
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			7824	AT	EET ALB	07/02/24 16:14
Total/NA	Analysis	8015M/D		1	7936	AT	EET ALB	07/04/24 06:28

Eurofins Albuquerque

Lab Chronicle

Client: Vertex
Project/Site: Endurance Lariat Water Line

Job ID: 885-7243-1

Client Sample ID: BH24-17 0FT

Lab Sample ID: 885-7243-17

Date Collected: 06/28/24 13:00

Matrix: Solid

Date Received: 07/02/24 08:03

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			7824	AT	EET ALB	07/02/24 16:14
Total/NA	Analysis	8021B		1	7937	AT	EET ALB	07/04/24 06:28
Total/NA	Prep	SHAKE			7882	KR	EET ALB	07/03/24 13:32
Total/NA	Analysis	8015M/D		1	7876	PD	EET ALB	07/03/24 21:12
Total/NA	Prep	300_Prep			7888	RC	EET ALB	07/03/24 15:45
Total/NA	Analysis	300.0		20	8024	JT	EET ALB	07/05/24 14:12

Client Sample ID: BH24-17 2FT

Lab Sample ID: 885-7243-18

Date Collected: 06/28/24 13:10

Matrix: Solid

Date Received: 07/02/24 08:03

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			7824	AT	EET ALB	07/02/24 16:14
Total/NA	Analysis	8015M/D		1	7936	AT	EET ALB	07/04/24 06:49
Total/NA	Prep	5030C			7824	AT	EET ALB	07/02/24 16:14
Total/NA	Analysis	8021B		1	7937	AT	EET ALB	07/04/24 06:49
Total/NA	Prep	SHAKE			7882	KR	EET ALB	07/03/24 13:32
Total/NA	Analysis	8015M/D		1	7876	PD	EET ALB	07/03/24 21:23
Total/NA	Prep	300_Prep			7888	RC	EET ALB	07/03/24 15:45
Total/NA	Analysis	300.0		20	8024	JT	EET ALB	07/05/24 14:24

Laboratory References:
EET ALB = Eurofins Albuquerque, 4901 Hawkins NE, Albuquerque, NM 87109, TEL (505)345-3975

Accreditation/Certification Summary

Client: Vertex
Project/Site: Endurance Lariat Water Line

Job ID: 885-7243-1

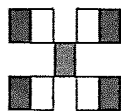
Laboratory: Eurofins Albuquerque

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
New Mexico	State	NM9425, NM0901	02-26-25
The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.			
Analysis Method	Prep Method	Matrix	Analyte
300.0	300_Prep	Solid	Chloride
8015M/D	5030C	Solid	Gasoline Range Organics [C6 - C10]
8015M/D	SHAKE	Solid	Diesel Range Organics [C10-C28]
8015M/D	SHAKE	Solid	Motor Oil Range Organics [C28-C40]
8021B	5030C	Solid	Benzene
8021B	5030C	Solid	Ethylbenzene
8021B	5030C	Solid	Toluene
8021B	5030C	Solid	Xylenes, Total
Oregon	NELAP	NM100001	02-26-25

[illegible]

7/26/2024



HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109 *g/g*

Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

email or Fax#:		QA/QC Package:		Project Manager:		
☐ Standard		☐ Level 4 (Full Validation)		Sally Carttar		
Accreditation: ☐ Az Compliance		Sampler: AL		On Ice: ☒ Yes ☐ No		
☐ NELAC		Cooler Temp (including CP): 0-7-0-1-20-6 (°C)		# of Coolers: 1		
☐ EDD (Type)						
Date	Time	Matrix	Sample Name	Container Type and #	Preservative Type	HEAL No.
6/29/24	0800	Soil	BH24-02	402	ICE	13
	0810		BH24-07			14
	0815		BH24-15	401*		15
	0820		BH24-15	402*		16
	0830		BH24-16	403*		17
	0835		BH24-16	404*		18
	1030		BH24-02			19
	1040		BH24-02			20
	1130		BH24-02			21
	1140		BH24-02			22
BTEX						
TPH/8015D (GRO / DRO / MRO)						
8081 Pesticides/8082 PCB's						
EDB (Method 504.1)						
PAHs by 8310 or 8270SIMS						
RCRA 8 Metals						
C F, Br, NO ₃ , NO ₂ , PO ₄ , SO ₄						
8260 (VOA)						
8270 (Semi-VOA)						
Total Coliform (Present/Absent)						

Remarks: Bill direct to XTO Energy

nAPP 2411739118

cost center # 1082151001

cc: scar-tar@vertex.ca ALudvik@vertex.ca

this possibility Any sub-contracted data will be clearly notated on the analytical report

11/24/15 0:21 BHA-1602

Login Sample Receipt Checklist

Client: Vertex

Job Number: 885-7243-1

Login Number: 7243

List Source: Eurofins Albuquerque

List Number: 1

Creator: McQuiston, Steven

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
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.	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").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	



Environment Testing

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ANALYTICAL REPORT

PREPARED FOR

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

Generated 7/26/2024 9:40:24 AM

JOB DESCRIPTION

Endurance Lariat Water Line

JOB NUMBER

885-7337-1

Eurofins Albuquerque
4901 Hawkins NE
Albuquerque NM 87109

Eurofins Albuquerque

Job Notes

The test results in this report relate only to the samples as received by the laboratory and will meet all requirements of the methodology, with any exceptions noted. This report shall not be reproduced except in full, without the express written approval of the laboratory. All questions should be directed to the Eurofins Environment Testing South Central, LLC Project Manager.

Authorization



Authorized for release by
Cheyenne Cason, Project Manager
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(505)345-3975

Generated
7/26/2024 9:40:24 AM

Client: Vertex
Project/Site: Endurance Lariat Water Line

Laboratory Job ID: 885-7337-1

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Definitions/Glossary

Client: Vertex
Project/Site: Endurance Lariat Water Line

Job ID: 885-7337-1

Qualifiers

GC VOA

Qualifier	Qualifier Description
S1+	Surrogate recovery exceeds control limits, high biased.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	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: Endurance Lariat Water Line

Job ID: 885-7337-1

Job ID: 885-7337-1Eurofins Albuquerque

Job Narrative
885-7337-1

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 and/or narrative comments are included to explain any exceptions, if applicable.

- Matrix QC may not be reported if insufficient sample is provided 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 7/3/2024 8:10 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 0.9°C.

Gasoline Range Organics

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

GC VOA

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

Diesel Range Organics

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.

Eurofins Albuquerque

Client Sample Results

Client: Vertex
Project/Site: Endurance Lariat Water Line

Job ID: 885-7337-1

Client Sample ID: BH24-26 0FT Lab Sample ID: 885-7337-1
Date Collected: 07/01/24 08:00 Matrix: Solid
Date Received: 07/03/24 08:10

Method: SW846 8015M/D - Gasoline Range Organics (GRO) (GC)									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Gasoline Range Organics [C6 - C10]	ND		4.9	mg/Kg		07/03/24 10:43	07/06/24 04:20	1	
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac	
4-Bromofluorobenzene (Surr)	97		35 - 166			07/03/24 10:43	07/06/24 04:20	1	

Method: SW846 8021B - Volatile Organic Compounds (GC)									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Benzene	ND		0.024	mg/Kg		07/03/24 10:43	07/06/24 04:20	1	
Ethylbenzene	ND		0.049	mg/Kg		07/03/24 10:43	07/06/24 04:20	1	
Toluene	ND		0.049	mg/Kg		07/03/24 10:43	07/06/24 04:20	1	
Xylenes, Total	ND		0.097	mg/Kg		07/03/24 10:43	07/06/24 04:20	1	
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac	
4-Bromofluorobenzene (Surr)	90		48 - 145			07/03/24 10:43	07/06/24 04:20	1	

Method: SW846 8015M/D - Diesel Range Organics (DRO) (GC)									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Diesel Range Organics [C10-C28]	12		9.0	mg/Kg		07/03/24 15:14	07/03/24 23:59	1	
Motor Oil Range Organics [C28-C40]	ND		45	mg/Kg		07/03/24 15:14	07/03/24 23:59	1	
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac	
Di-n-octyl phthalate (Surr)	77		62 - 134			07/03/24 15:14	07/03/24 23:59	1	

Method: EPA 300.0 - Anions, Ion Chromatography									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Chloride	ND		60	mg/Kg		07/05/24 15:35	07/05/24 19:31	20	

Client Sample Results

Client: Vertex

Job ID: 885-7337-1

Project/Site: Endurance Lariat Water Line

Client Sample ID: BH24-26 2FT

Lab Sample ID: 885-7337-2

Date Collected: 07/01/24 08:10

Matrix: Solid

Date Received: 07/03/24 08:10

Method: SW846 8015M/D - Gasoline Range Organics (GRO) (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics [C6 - C10]	ND		4.9	mg/Kg		07/03/24 10:43	07/06/24 05:07	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	95		35 - 166			07/03/24 10:43	07/06/24 05:07	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.025	mg/Kg		07/03/24 10:43	07/06/24 05:07	1
Ethylbenzene	ND		0.049	mg/Kg		07/03/24 10:43	07/06/24 05:07	1
Toluene	ND		0.049	mg/Kg		07/03/24 10:43	07/06/24 05:07	1
Xylenes, Total	ND		0.098	mg/Kg		07/03/24 10:43	07/06/24 05:07	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	89		48 - 145			07/03/24 10:43	07/06/24 05:07	1

Method: SW846 8015M/D - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		9.3	mg/Kg		07/03/24 15:14	07/04/24 00:10	1
Motor Oil Range Organics [C28-C40]	ND		47	mg/Kg		07/03/24 15:14	07/04/24 00:10	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
Di-n-octyl phthalate (Surr)	94		62 - 134			07/03/24 15:14	07/04/24 00:10	1

Method: EPA 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		59	mg/Kg		07/05/24 15:35	07/05/24 19:44	20

Eurofins Albuquerque

Client Sample Results

Client: Vertex
Project/Site: Endurance Lariat Water Line

Job ID: 885-7337-1

Client Sample ID: BH24-26 4FT

Lab Sample ID: 885-7337-3

Date Collected: 07/01/24 08:20

Matrix: Solid

Date Received: 07/03/24 08:10

Method: SW846 8015M/D - Gasoline Range Organics (GRO) (GC)									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Gasoline Range Organics [C6 - C10]	ND		4.9	mg/Kg		07/03/24 10:43	07/06/24 05:31	1	
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac	
4-Bromofluorobenzene (Surr)	95		35 - 166			07/03/24 10:43	07/06/24 05:31	1	
Method: SW846 8021B - Volatile Organic Compounds (GC)									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Benzene	ND		0.025	mg/Kg		07/03/24 10:43	07/06/24 05:31	1	
Ethylbenzene	ND		0.049	mg/Kg		07/03/24 10:43	07/06/24 05:31	1	
Toluene	ND		0.049	mg/Kg		07/03/24 10:43	07/06/24 05:31	1	
Xylenes, Total	ND		0.099	mg/Kg		07/03/24 10:43	07/06/24 05:31	1	
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac	
4-Bromofluorobenzene (Surr)	89		48 - 145			07/03/24 10:43	07/06/24 05:31	1	
Method: SW846 8015M/D - Diesel Range Organics (DRO) (GC)									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Diesel Range Organics [C10-C28]	ND		9.7	mg/Kg		07/03/24 15:14	07/04/24 00:21	1	
Motor Oil Range Organics [C28-C40]	ND		49	mg/Kg		07/03/24 15:14	07/04/24 00:21	1	
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac	
Di-n-octyl phthalate (Surr)	93		62 - 134			07/03/24 15:14	07/04/24 00:21	1	
Method: EPA 300.0 - Anions, Ion Chromatography									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Chloride	ND		60	mg/Kg		07/05/24 15:35	07/05/24 19:56	20	

Client Sample Results

Client: Vertex

Job ID: 885-7337-1

Project/Site: Endurance Lariat Water Line

Client Sample ID: BH24-18 0FT

Lab Sample ID: 885-7337-4

Date Collected: 07/01/24 08:30

Matrix: Solid

Date Received: 07/03/24 08:10

Method: SW846 8015M/D - Gasoline Range Organics (GRO) (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics [C6 - C10]	ND		4.7	mg/Kg		07/03/24 10:43	07/06/24 05:54	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	90		35 - 166			07/03/24 10:43	07/06/24 05:54	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.024	mg/Kg		07/03/24 10:43	07/06/24 05:54	1
Ethylbenzene	ND		0.047	mg/Kg		07/03/24 10:43	07/06/24 05:54	1
Toluene	ND		0.047	mg/Kg		07/03/24 10:43	07/06/24 05:54	1
Xylenes, Total	ND		0.094	mg/Kg		07/03/24 10:43	07/06/24 05:54	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	83		48 - 145			07/03/24 10:43	07/06/24 05:54	1

Method: SW846 8015M/D - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	22		9.8	mg/Kg		07/03/24 15:14	07/04/24 00:43	1
Motor Oil Range Organics [C28-C40]	ND		49	mg/Kg		07/03/24 15:14	07/04/24 00:43	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
Di-n-octyl phthalate (Surr)	91		62 - 134			07/03/24 15:14	07/04/24 00:43	1

Method: EPA 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		60	mg/Kg		07/05/24 15:35	07/05/24 20:09	20

Eurofins Albuquerque

Client Sample Results

Client: Vertex
Project/Site: Endurance Lariat Water Line

Job ID: 885-7337-1

Client Sample ID: BH24-18 2FT Lab Sample ID: 885-7337-5
Date Collected: 07/01/24 08:40 Matrix: Solid
Date Received: 07/03/24 08:10

Method: SW846 8015M/D - Gasoline Range Organics (GRO) (GC)									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Gasoline Range Organics [C6 - C10]	ND		4.9	mg/Kg		07/03/24 10:43	07/06/24 06:17		1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac	
4-Bromofluorobenzene (Surr)	91		35 - 166			07/03/24 10:43	07/06/24 06:17		1
Method: SW846 8021B - Volatile Organic Compounds (GC)									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Benzene	ND		0.025	mg/Kg		07/03/24 10:43	07/06/24 06:17		1
Ethylbenzene	ND		0.049	mg/Kg		07/03/24 10:43	07/06/24 06:17		1
Toluene	ND		0.049	mg/Kg		07/03/24 10:43	07/06/24 06:17		1
Xylenes, Total	ND		0.099	mg/Kg		07/03/24 10:43	07/06/24 06:17		1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac	
4-Bromofluorobenzene (Surr)	85		48 - 145			07/03/24 10:43	07/06/24 06:17		1
Method: SW846 8015M/D - Diesel Range Organics (DRO) (GC)									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Diesel Range Organics [C10-C28]	13		9.8	mg/Kg		07/03/24 15:14	07/04/24 00:55		1
Motor Oil Range Organics [C28-C40]	ND		49	mg/Kg		07/03/24 15:14	07/04/24 00:55		1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac	
Di-n-octyl phthalate (Surr)	86		62 - 134			07/03/24 15:14	07/04/24 00:55		1
Method: EPA 300.0 - Anions, Ion Chromatography									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Chloride	ND		60	mg/Kg		07/05/24 15:35	07/05/24 20:21		20

Client Sample Results

Client: Vertex
Project/Site: Endurance Lariat Water Line

Job ID: 885-7337-1

Client Sample ID: BH24-18 4FT Lab Sample ID: 885-7337-6
Date Collected: 07/01/24 08:50 Matrix: Solid
Date Received: 07/03/24 08:10

Method: SW846 8015M/D - Gasoline Range Organics (GRO) (GC)									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Gasoline Range Organics [C6 - C10]	ND		4.9	mg/Kg		07/03/24 10:43	07/06/24 06:41	1	
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac	
4-Bromofluorobenzene (Surr)	94		35 - 166			07/03/24 10:43	07/06/24 06:41	1	

Method: SW846 8021B - Volatile Organic Compounds (GC)									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Benzene	ND		0.025	mg/Kg		07/03/24 10:43	07/06/24 06:41	1	
Ethylbenzene	ND		0.049	mg/Kg		07/03/24 10:43	07/06/24 06:41	1	
Toluene	ND		0.049	mg/Kg		07/03/24 10:43	07/06/24 06:41	1	
Xylenes, Total	ND		0.098	mg/Kg		07/03/24 10:43	07/06/24 06:41	1	
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac	
4-Bromofluorobenzene (Surr)	86		48 - 145			07/03/24 10:43	07/06/24 06:41	1	

Method: SW846 8015M/D - Diesel Range Organics (DRO) (GC)									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Diesel Range Organics [C10-C28]	ND		9.9	mg/Kg		07/03/24 15:14	07/04/24 01:06	1	
Motor Oil Range Organics [C28-C40]	ND		50	mg/Kg		07/03/24 15:14	07/04/24 01:06	1	
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac	
Di-n-octyl phthalate (Surr)	93		62 - 134			07/03/24 15:14	07/04/24 01:06	1	

Method: EPA 300.0 - Anions, Ion Chromatography									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Chloride	81		60	mg/Kg		07/05/24 15:35	07/05/24 20:58	20	

Client Sample Results

Client: Vertex
Project/Site: Endurance Lariat Water Line

Job ID: 885-7337-1

Client Sample ID: BH24-19 0FT

Lab Sample ID: 885-7337-7

Date Collected: 07/01/24 09:00

Matrix: Solid

Date Received: 07/03/24 08:10

Method: SW846 8015M/D - Gasoline Range Organics (GRO) (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics [C6 - C10]	ND		5.0	mg/Kg		07/03/24 10:43	07/06/24 07:04	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	93		35 - 166			07/03/24 10:43	07/06/24 07:04	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.025	mg/Kg		07/03/24 10:43	07/06/24 07:04	1
Ethylbenzene	ND		0.050	mg/Kg		07/03/24 10:43	07/06/24 07:04	1
Toluene	ND		0.050	mg/Kg		07/03/24 10:43	07/06/24 07:04	1
Xylenes, Total	ND		0.10	mg/Kg		07/03/24 10:43	07/06/24 07:04	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	86		48 - 145			07/03/24 10:43	07/06/24 07:04	1

Method: SW846 8015M/D - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	30		9.9	mg/Kg		07/03/24 15:14	07/04/24 01:17	1
Motor Oil Range Organics [C28-C40]	ND		50	mg/Kg		07/03/24 15:14	07/04/24 01:17	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
Di-n-octyl phthalate (Surr)	94		62 - 134			07/03/24 15:14	07/04/24 01:17	1

Method: EPA 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	3200		150	mg/Kg		07/05/24 15:35	07/08/24 23:26	50

Client Sample Results

Client: Vertex

Project/Site: Endurance Lariat Water Line

Job ID: 885-7337-1

Client Sample ID: BH24-19 2FT

Lab Sample ID: 885-7337-8

Date Collected: 07/01/24 09:10

Matrix: Solid

Date Received: 07/03/24 08:10

Method: SW846 8015M/D - Gasoline Range Organics (GRO) (GC)									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Gasoline Range Organics [C6 - C10]	ND		4.9	mg/Kg		07/03/24 10:43	07/06/24 07:28	1	
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac	
4-Bromofluorobenzene (Surr)	108		35 - 166			07/03/24 10:43	07/06/24 07:28	1	
Method: SW846 8021B - Volatile Organic Compounds (GC)									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Benzene	ND		0.024	mg/Kg		07/03/24 10:43	07/06/24 07:28	1	
Ethylbenzene	ND		0.049	mg/Kg		07/03/24 10:43	07/06/24 07:28	1	
Toluene	ND		0.049	mg/Kg		07/03/24 10:43	07/06/24 07:28	1	
Xylenes, Total	ND		0.097	mg/Kg		07/03/24 10:43	07/06/24 07:28	1	
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac	
4-Bromofluorobenzene (Surr)	88		48 - 145			07/03/24 10:43	07/06/24 07:28	1	
Method: SW846 8015M/D - Diesel Range Organics (DRO) (GC)									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Diesel Range Organics [C10-C28]	320		8.8	mg/Kg		07/03/24 15:14	07/04/24 01:29	1	
Motor Oil Range Organics [C28-C40]	160		44	mg/Kg		07/03/24 15:14	07/04/24 01:29	1	
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac	
Di-n-octyl phthalate (Surr)	99		62 - 134			07/03/24 15:14	07/04/24 01:29	1	
Method: EPA 300.0 - Anions, Ion Chromatography									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Chloride	390		60	mg/Kg		07/05/24 15:35	07/05/24 21:47	20	

Client Sample Results

Client: Vertex
Project/Site: Endurance Lariat Water Line

Job ID: 885-7337-1

Client Sample ID: BH24-19 4FT Lab Sample ID: 885-7337-9
Date Collected: 07/01/24 09:20 Matrix: Solid
Date Received: 07/03/24 08:10

Method: SW846 8015M/D - Gasoline Range Organics (GRO) (GC)									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Gasoline Range Organics [C6 - C10]	5.9		4.9	mg/Kg		07/03/24 10:43	07/06/24 07:52	1	
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac	
4-Bromofluorobenzene (Surr)	139		35 - 166			07/03/24 10:43	07/06/24 07:52	1	

Method: SW846 8021B - Volatile Organic Compounds (GC)									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Benzene	ND		0.025	mg/Kg		07/03/24 10:43	07/06/24 07:52	1	
Ethylbenzene	ND		0.049	mg/Kg		07/03/24 10:43	07/06/24 07:52	1	
Toluene	ND		0.049	mg/Kg		07/03/24 10:43	07/06/24 07:52	1	
Xylenes, Total	ND		0.098	mg/Kg		07/03/24 10:43	07/06/24 07:52	1	
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac	
4-Bromofluorobenzene (Surr)	90		48 - 145			07/03/24 10:43	07/06/24 07:52	1	

Method: SW846 8015M/D - Diesel Range Organics (DRO) (GC)									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Diesel Range Organics [C10-C28]	310		9.3	mg/Kg		07/03/24 15:14	07/04/24 01:40	1	
Motor Oil Range Organics [C28-C40]	160		46	mg/Kg		07/03/24 15:14	07/04/24 01:40	1	
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac	
Di-n-octyl phthalate (Surr)	101		62 - 134			07/03/24 15:14	07/04/24 01:40	1	

Method: EPA 300.0 - Anions, Ion Chromatography									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Chloride	370		60	mg/Kg		07/05/24 15:35	07/05/24 22:00	20	

Client Sample Results

Client: Vertex
Project/Site: Endurance Lariat Water Line

Job ID: 885-7337-1

Client Sample ID: BH24-20 0FT Lab Sample ID: 885-7337-10
Date Collected: 07/01/24 09:30 Matrix: Solid
Date Received: 07/03/24 08:10

Method: SW846 8015M/D - Gasoline Range Organics (GRO) (GC)									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Gasoline Range Organics [C6 - C10]	ND		4.8	mg/Kg		07/03/24 10:43	07/06/24 08:15		1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac	
4-Bromofluorobenzene (Surr)	94		35 - 166			07/03/24 10:43	07/06/24 08:15		1
Method: SW846 8021B - Volatile Organic Compounds (GC)									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Benzene	ND		0.024	mg/Kg		07/03/24 10:43	07/06/24 08:15		1
Ethylbenzene	ND		0.048	mg/Kg		07/03/24 10:43	07/06/24 08:15		1
Toluene	ND		0.048	mg/Kg		07/03/24 10:43	07/06/24 08:15		1
Xylenes, Total	ND		0.097	mg/Kg		07/03/24 10:43	07/06/24 08:15		1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac	
4-Bromofluorobenzene (Surr)	89		48 - 145			07/03/24 10:43	07/06/24 08:15		1
Method: SW846 8015M/D - Diesel Range Organics (DRO) (GC)									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Diesel Range Organics [C10-C28]	ND		9.9	mg/Kg		07/03/24 15:14	07/04/24 01:51		1
Motor Oil Range Organics [C28-C40]	ND		49	mg/Kg		07/03/24 15:14	07/04/24 01:51		1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac	
Di-n-octyl phthalate (Surr)	106		62 - 134			07/03/24 15:14	07/04/24 01:51		1
Method: EPA 300.0 - Anions, Ion Chromatography									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Chloride	ND		60	mg/Kg		07/05/24 15:35	07/05/24 22:12		20

Client Sample Results

Client: Vertex
Project/Site: Endurance Lariat Water Line

Job ID: 885-7337-1

Client Sample ID: BH24-20 2FT Lab Sample ID: 885-7337-11
Date Collected: 07/01/24 09:40 Matrix: Solid
Date Received: 07/03/24 08:10

Method: SW846 8015M/D - Gasoline Range Organics (GRO) (GC)									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Gasoline Range Organics [C6 - C10]	ND		4.7	mg/Kg		07/03/24 10:43	07/06/24 08:39	1	
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac	
4-Bromofluorobenzene (Surr)	92		35 - 166			07/03/24 10:43	07/06/24 08:39	1	
Method: SW846 8021B - Volatile Organic Compounds (GC)									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Benzene	ND		0.023	mg/Kg		07/03/24 10:43	07/06/24 08:39	1	
Ethylbenzene	ND		0.047	mg/Kg		07/03/24 10:43	07/06/24 08:39	1	
Toluene	ND		0.047	mg/Kg		07/03/24 10:43	07/06/24 08:39	1	
Xylenes, Total	ND		0.094	mg/Kg		07/03/24 10:43	07/06/24 08:39	1	
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac	
4-Bromofluorobenzene (Surr)	86		48 - 145			07/03/24 10:43	07/06/24 08:39	1	
Method: SW846 8015M/D - Diesel Range Organics (DRO) (GC)									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Diesel Range Organics [C10-C28]	ND		10	mg/Kg		07/03/24 15:14	07/04/24 02:03	1	
Motor Oil Range Organics [C28-C40]	ND		50	mg/Kg		07/03/24 15:14	07/04/24 02:03	1	
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac	
Di-n-octyl phthalate (Surr)	97		62 - 134			07/03/24 15:14	07/04/24 02:03	1	
Method: EPA 300.0 - Anions, Ion Chromatography									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Chloride	ND		60	mg/Kg		07/05/24 15:35	07/05/24 22:24	20	

Client Sample Results

Client: Vertex
Project/Site: Endurance Lariat Water Line

Job ID: 885-7337-1

Client Sample ID: BH24-20 4FT Lab Sample ID: 885-7337-12
Date Collected: 07/01/24 09:50 Matrix: Solid
Date Received: 07/03/24 08:10

Method: SW846 8015M/D - Gasoline Range Organics (GRO) (GC)									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Gasoline Range Organics [C6 - C10]	ND		5.0	mg/Kg		07/03/24 10:43	07/06/24 09:49		1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac	
4-Bromofluorobenzene (Surr)	96		35 - 166			07/03/24 10:43	07/06/24 09:49		1
Method: SW846 8021B - Volatile Organic Compounds (GC)									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Benzene	ND		0.025	mg/Kg		07/03/24 10:43	07/06/24 09:49		1
Ethylbenzene	ND		0.050	mg/Kg		07/03/24 10:43	07/06/24 09:49		1
Toluene	ND		0.050	mg/Kg		07/03/24 10:43	07/06/24 09:49		1
Xylenes, Total	ND		0.10	mg/Kg		07/03/24 10:43	07/06/24 09:49		1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac	
4-Bromofluorobenzene (Surr)	90		48 - 145			07/03/24 10:43	07/06/24 09:49		1
Method: SW846 8015M/D - Diesel Range Organics (DRO) (GC)									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Diesel Range Organics [C10-C28]	ND		9.4	mg/Kg		07/03/24 15:14	07/04/24 02:14		1
Motor Oil Range Organics [C28-C40]	ND		47	mg/Kg		07/03/24 15:14	07/04/24 02:14		1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac	
Di-n-octyl phthalate (Surr)	99		62 - 134			07/03/24 15:14	07/04/24 02:14		1
Method: EPA 300.0 - Anions, Ion Chromatography									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Chloride	ND		60	mg/Kg		07/05/24 15:35	07/05/24 22:37		20

Client Sample Results

Client: Vertex
Project/Site: Endurance Lariat Water Line

Job ID: 885-7337-1

Client Sample ID: BH24-21 0FT Lab Sample ID: 885-7337-13
Date Collected: 07/01/24 10:00 Matrix: Solid
Date Received: 07/03/24 08:10

Method: SW846 8015M/D - Gasoline Range Organics (GRO) (GC)									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Gasoline Range Organics [C6 - C10]	ND		4.7	mg/Kg		07/03/24 10:43	07/06/24 10:12		1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac	
4-Bromofluorobenzene (Surr)	94		35 - 166			07/03/24 10:43	07/06/24 10:12		1
Method: SW846 8021B - Volatile Organic Compounds (GC)									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Benzene	ND		0.024	mg/Kg		07/03/24 10:43	07/06/24 10:12		1
Ethylbenzene	ND		0.047	mg/Kg		07/03/24 10:43	07/06/24 10:12		1
Toluene	ND		0.047	mg/Kg		07/03/24 10:43	07/06/24 10:12		1
Xylenes, Total	ND		0.095	mg/Kg		07/03/24 10:43	07/06/24 10:12		1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac	
4-Bromofluorobenzene (Surr)	88		48 - 145			07/03/24 10:43	07/06/24 10:12		1
Method: SW846 8015M/D - Diesel Range Organics (DRO) (GC)									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Diesel Range Organics [C10-C28]	ND		9.7	mg/Kg		07/03/24 15:14	07/04/24 02:25		1
Motor Oil Range Organics [C28-C40]	ND		48	mg/Kg		07/03/24 15:14	07/04/24 02:25		1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac	
Di-n-octyl phthalate (Surr)	100		62 - 134			07/03/24 15:14	07/04/24 02:25		1
Method: EPA 300.0 - Anions, Ion Chromatography									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Chloride	60		59	mg/Kg		07/05/24 15:35	07/05/24 22:49		20

Client Sample Results

Client: Vertex
Project/Site: Endurance Lariat Water Line

Job ID: 885-7337-1

Client Sample ID: BH24-21 2FT Lab Sample ID: 885-7337-14
Date Collected: 07/01/24 10:10 Matrix: Solid
Date Received: 07/03/24 08:10

Method: SW846 8015M/D - Gasoline Range Organics (GRO) (GC)									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Gasoline Range Organics [C6 - C10]	ND		4.9	mg/Kg		07/03/24 10:43	07/06/24 10:36		1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac	
4-Bromofluorobenzene (Surr)	95		35 - 166			07/03/24 10:43	07/06/24 10:36		1
Method: SW846 8021B - Volatile Organic Compounds (GC)									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Benzene	ND		0.024	mg/Kg		07/03/24 10:43	07/06/24 10:36		1
Ethylbenzene	ND		0.049	mg/Kg		07/03/24 10:43	07/06/24 10:36		1
Toluene	ND		0.049	mg/Kg		07/03/24 10:43	07/06/24 10:36		1
Xylenes, Total	ND		0.098	mg/Kg		07/03/24 10:43	07/06/24 10:36		1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac	
4-Bromofluorobenzene (Surr)	89		48 - 145			07/03/24 10:43	07/06/24 10:36		1
Method: SW846 8015M/D - Diesel Range Organics (DRO) (GC)									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Diesel Range Organics [C10-C28]	ND		9.6	mg/Kg		07/03/24 15:14	07/04/24 02:37		1
Motor Oil Range Organics [C28-C40]	ND		48	mg/Kg		07/03/24 15:14	07/04/24 02:37		1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac	
Di-n-octyl phthalate (Surr)	101		62 - 134			07/03/24 15:14	07/04/24 02:37		1
Method: EPA 300.0 - Anions, Ion Chromatography									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Chloride	ND		60	mg/Kg		07/05/24 15:35	07/05/24 23:01		20

Client Sample Results

Client: Vertex
Project/Site: Endurance Lariat Water Line

Job ID: 885-7337-1

Client Sample ID: BH24-21 4FT Lab Sample ID: 885-7337-15
Date Collected: 07/01/24 10:20 Matrix: Solid
Date Received: 07/03/24 08:10

Method: SW846 8015M/D - Gasoline Range Organics (GRO) (GC)									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Gasoline Range Organics [C6 - C10]	ND		4.9	mg/Kg		07/03/24 15:36	07/08/24 21:43	1	
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac	
4-Bromofluorobenzene (Surr)	94		35 - 166			07/03/24 15:36	07/08/24 21:43	1	
Method: SW846 8021B - Volatile Organic Compounds (GC)									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Benzene	ND		0.025	mg/Kg		07/03/24 15:36	07/08/24 21:43	1	
Ethylbenzene	ND		0.049	mg/Kg		07/03/24 15:36	07/08/24 21:43	1	
Toluene	ND		0.049	mg/Kg		07/03/24 15:36	07/08/24 21:43	1	
Xylenes, Total	ND		0.099	mg/Kg		07/03/24 15:36	07/08/24 21:43	1	
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac	
4-Bromofluorobenzene (Surr)	90		48 - 145			07/03/24 15:36	07/08/24 21:43	1	
Method: SW846 8015M/D - Diesel Range Organics (DRO) (GC)									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Diesel Range Organics [C10-C28]	ND		9.8	mg/Kg		07/05/24 09:50	07/05/24 15:21	1	
Motor Oil Range Organics [C28-C40]	ND		49	mg/Kg		07/05/24 09:50	07/05/24 15:21	1	
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac	
Di-n-octyl phthalate (Surr)	94		62 - 134			07/05/24 09:50	07/05/24 15:21	1	
Method: EPA 300.0 - Anions, Ion Chromatography									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Chloride	ND		60	mg/Kg		07/08/24 12:29	07/08/24 18:56	20	

Client Sample Results

Client: Vertex

Project/Site: Endurance Lariat Water Line

Job ID: 885-7337-1

Client Sample ID: BH24-22 0FT

Lab Sample ID: 885-7337-16

Date Collected: 07/01/24 10:30

Matrix: Solid

Date Received: 07/03/24 08:10

Method: SW846 8015M/D - Gasoline Range Organics (GRO) (GC)									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Gasoline Range Organics [C6 - C10]	ND		5.0	mg/Kg		07/03/24 15:36	07/08/24 22:49	1	
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac	
4-Bromofluorobenzene (Surr)	98		35 - 166			07/03/24 15:36	07/08/24 22:49	1	
Method: SW846 8021B - Volatile Organic Compounds (GC)									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Benzene	ND		0.025	mg/Kg		07/03/24 15:36	07/08/24 22:49	1	
Ethylbenzene	ND		0.050	mg/Kg		07/03/24 15:36	07/08/24 22:49	1	
Toluene	ND		0.050	mg/Kg		07/03/24 15:36	07/08/24 22:49	1	
Xylenes, Total	ND		0.10	mg/Kg		07/03/24 15:36	07/08/24 22:49	1	
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac	
4-Bromofluorobenzene (Surr)	90		48 - 145			07/03/24 15:36	07/08/24 22:49	1	
Method: SW846 8015M/D - Diesel Range Organics (DRO) (GC)									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Diesel Range Organics [C10-C28]	ND		9.2	mg/Kg		07/05/24 09:50	07/05/24 15:32	1	
Motor Oil Range Organics [C28-C40]	ND		46	mg/Kg		07/05/24 09:50	07/05/24 15:32	1	
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac	
Di-n-octyl phthalate (Surr)	91		62 - 134			07/05/24 09:50	07/05/24 15:32	1	
Method: EPA 300.0 - Anions, Ion Chromatography									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Chloride	97		60	mg/Kg		07/08/24 12:29	07/08/24 19:09	20	

Client Sample Results

Client: Vertex
Project/Site: Endurance Lariat Water Line

Job ID: 885-7337-1

Client Sample ID: BH24-22 2FT Lab Sample ID: 885-7337-17
Date Collected: 07/01/24 10:40 Matrix: Solid
Date Received: 07/03/24 08:10

Method: SW846 8015M/D - Gasoline Range Organics (GRO) (GC)									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Gasoline Range Organics [C6 - C10]	ND		4.8	mg/Kg		07/03/24 15:36	07/08/24 23:54	1	
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac	
4-Bromofluorobenzene (Surr)	91		35 - 166			07/03/24 15:36	07/08/24 23:54	1	
Method: SW846 8021B - Volatile Organic Compounds (GC)									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Benzene	ND		0.024	mg/Kg		07/03/24 15:36	07/08/24 23:54	1	
Ethylbenzene	ND		0.048	mg/Kg		07/03/24 15:36	07/08/24 23:54	1	
Toluene	ND		0.048	mg/Kg		07/03/24 15:36	07/08/24 23:54	1	
Xylenes, Total	ND		0.097	mg/Kg		07/03/24 15:36	07/08/24 23:54	1	
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac	
4-Bromofluorobenzene (Surr)	89		48 - 145			07/03/24 15:36	07/08/24 23:54	1	
Method: SW846 8015M/D - Diesel Range Organics (DRO) (GC)									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Diesel Range Organics [C10-C28]	ND		9.4	mg/Kg		07/05/24 09:50	07/05/24 15:43	1	
Motor Oil Range Organics [C28-C40]	ND		47	mg/Kg		07/05/24 09:50	07/05/24 15:43	1	
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac	
Di-n-octyl phthalate (Surr)	94		62 - 134			07/05/24 09:50	07/05/24 15:43	1	
Method: EPA 300.0 - Anions, Ion Chromatography									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Chloride	ND		60	mg/Kg		07/08/24 12:29	07/08/24 20:13	20	

Client Sample Results

Client: Vertex
Project/Site: Endurance Lariat Water Line

Job ID: 885-7337-1

Client Sample ID: BH24-22 4FT Lab Sample ID: 885-7337-18
Date Collected: 07/01/24 10:50 Matrix: Solid
Date Received: 07/03/24 08:10

Method: SW846 8015M/D - Gasoline Range Organics (GRO) (GC)									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Gasoline Range Organics [C6 - C10]	ND		4.8	mg/Kg		07/03/24 15:36	07/09/24 00:16		1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac	
4-Bromofluorobenzene (Surr)	90		35 - 166			07/03/24 15:36	07/09/24 00:16		1
Method: SW846 8021B - Volatile Organic Compounds (GC)									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Benzene	ND		0.024	mg/Kg		07/03/24 15:36	07/09/24 00:16		1
Ethylbenzene	ND		0.048	mg/Kg		07/03/24 15:36	07/09/24 00:16		1
Toluene	ND		0.048	mg/Kg		07/03/24 15:36	07/09/24 00:16		1
Xylenes, Total	ND		0.096	mg/Kg		07/03/24 15:36	07/09/24 00:16		1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac	
4-Bromofluorobenzene (Surr)	90		48 - 145			07/03/24 15:36	07/09/24 00:16		1
Method: SW846 8015M/D - Diesel Range Organics (DRO) (GC)									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Diesel Range Organics [C10-C28]	ND		9.3	mg/Kg		07/05/24 09:50	07/05/24 15:54		1
Motor Oil Range Organics [C28-C40]	ND		46	mg/Kg		07/05/24 09:50	07/05/24 15:54		1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac	
Di-n-octyl phthalate (Surr)	102		62 - 134			07/05/24 09:50	07/05/24 15:54		1
Method: EPA 300.0 - Anions, Ion Chromatography									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Chloride	ND		60	mg/Kg		07/08/24 12:29	07/08/24 20:52		20

Client Sample Results

Client: Vertex
Project/Site: Endurance Lariat Water Line

Job ID: 885-7337-1

Client Sample ID: BH24-23 0FT Lab Sample ID: 885-7337-19
Date Collected: 07/01/24 11:00 Matrix: Solid
Date Received: 07/03/24 08:10

Method: SW846 8015M/D - Gasoline Range Organics (GRO) (GC)									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Gasoline Range Organics [C6 - C10]	ND		4.9	mg/Kg		07/03/24 15:36	07/09/24 00:37		1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac	
4-Bromofluorobenzene (Surr)	98		35 - 166			07/03/24 15:36	07/09/24 00:37		1
Method: SW846 8021B - Volatile Organic Compounds (GC)									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Benzene	ND		0.025	mg/Kg		07/03/24 15:36	07/09/24 00:37		1
Ethylbenzene	ND		0.049	mg/Kg		07/03/24 15:36	07/09/24 00:37		1
Toluene	ND		0.049	mg/Kg		07/03/24 15:36	07/09/24 00:37		1
Xylenes, Total	ND		0.099	mg/Kg		07/03/24 15:36	07/09/24 00:37		1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac	
4-Bromofluorobenzene (Surr)	89		48 - 145			07/03/24 15:36	07/09/24 00:37		1
Method: SW846 8015M/D - Diesel Range Organics (DRO) (GC)									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Diesel Range Organics [C10-C28]	14		9.9	mg/Kg		07/05/24 09:50	07/05/24 16:05		1
Motor Oil Range Organics [C28-C40]	ND		49	mg/Kg		07/05/24 09:50	07/05/24 16:05		1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac	
Di-n-octyl phthalate (Surr)	105		62 - 134			07/05/24 09:50	07/05/24 16:05		1
Method: EPA 300.0 - Anions, Ion Chromatography									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Chloride	96		60	mg/Kg		07/08/24 12:29	07/08/24 21:05		20

Client Sample Results

Client: Vertex
Project/Site: Endurance Lariat Water Line

Job ID: 885-7337-1

Client Sample ID: BH24-23 2FT Lab Sample ID: 885-7337-20
Date Collected: 07/01/24 11:10 Matrix: Solid
Date Received: 07/03/24 08:10

Method: SW846 8015M/D - Gasoline Range Organics (GRO) (GC)									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Gasoline Range Organics [C6 - C10]	ND		4.9	mg/Kg		07/03/24 15:36	07/09/24 00:59		1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac	
4-Bromofluorobenzene (Surr)	100		35 - 166			07/03/24 15:36	07/09/24 00:59		1
Method: SW846 8021B - Volatile Organic Compounds (GC)									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Benzene	ND		0.025	mg/Kg		07/03/24 15:36	07/09/24 00:59		1
Ethylbenzene	ND		0.049	mg/Kg		07/03/24 15:36	07/09/24 00:59		1
Toluene	ND		0.049	mg/Kg		07/03/24 15:36	07/09/24 00:59		1
Xylenes, Total	ND		0.098	mg/Kg		07/03/24 15:36	07/09/24 00:59		1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac	
4-Bromofluorobenzene (Surr)	90		48 - 145			07/03/24 15:36	07/09/24 00:59		1
Method: SW846 8015M/D - Diesel Range Organics (DRO) (GC)									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Diesel Range Organics [C10-C28]	ND		9.8	mg/Kg		07/05/24 09:50	07/05/24 16:27		1
Motor Oil Range Organics [C28-C40]	ND		49	mg/Kg		07/05/24 09:50	07/05/24 16:27		1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac	
Di-n-octyl phthalate (Surr)	105		62 - 134			07/05/24 09:50	07/05/24 16:27		1
Method: EPA 300.0 - Anions, Ion Chromatography									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Chloride	ND		60	mg/Kg		07/08/24 12:29	07/08/24 21:18		20

Client Sample Results

Client: Vertex
Project/Site: Endurance Lariat Water Line

Job ID: 885-7337-1

Client Sample ID: BH24-23 4FT

Lab Sample ID: 885-7337-21

Date Collected: 07/01/24 11:20

Matrix: Solid

Date Received: 07/03/24 08:10

Method: SW846 8015M/D - Gasoline Range Organics (GRO) (GC)									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Gasoline Range Organics [C6 - C10]	ND		4.8	mg/Kg		07/03/24 15:36	07/09/24 01:21		1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac	
4-Bromofluorobenzene (Surr)	93		35 - 166			07/03/24 15:36	07/09/24 01:21		1
Method: SW846 8021B - Volatile Organic Compounds (GC)									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Benzene	ND		0.024	mg/Kg		07/03/24 15:36	07/09/24 01:21		1
Ethylbenzene	ND		0.048	mg/Kg		07/03/24 15:36	07/09/24 01:21		1
Toluene	ND		0.048	mg/Kg		07/03/24 15:36	07/09/24 01:21		1
Xylenes, Total	ND		0.096	mg/Kg		07/03/24 15:36	07/09/24 01:21		1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac	
4-Bromofluorobenzene (Surr)	89		48 - 145			07/03/24 15:36	07/09/24 01:21		1
Method: SW846 8015M/D - Diesel Range Organics (DRO) (GC)									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Diesel Range Organics [C10-C28]	ND		9.4	mg/Kg		07/05/24 09:50	07/05/24 16:38		1
Motor Oil Range Organics [C28-C40]	ND		47	mg/Kg		07/05/24 09:50	07/05/24 16:38		1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac	
Di-n-octyl phthalate (Surr)	106		62 - 134			07/05/24 09:50	07/05/24 16:38		1
Method: EPA 300.0 - Anions, Ion Chromatography									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Chloride	ND		60	mg/Kg		07/08/24 12:29	07/08/24 21:30		20

Client Sample Results

Client: Vertex
Project/Site: Endurance Lariat Water Line

Job ID: 885-7337-1

Client Sample ID: BH24-24 0FT

Lab Sample ID: 885-7337-22

Date Collected: 07/01/24 11:30

Matrix: Solid

Date Received: 07/03/24 08:10

Method: SW846 8015M/D - Gasoline Range Organics (GRO) (GC)									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Gasoline Range Organics [C6 - C10]	ND		4.9	mg/Kg		07/03/24 15:36	07/09/24 01:43		1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac	
4-Bromofluorobenzene (Surr)	93		35 - 166			07/03/24 15:36	07/09/24 01:43		1
Method: SW846 8021B - Volatile Organic Compounds (GC)									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Benzene	ND		0.025	mg/Kg		07/03/24 15:36	07/09/24 01:43		1
Ethylbenzene	ND		0.049	mg/Kg		07/03/24 15:36	07/09/24 01:43		1
Toluene	ND		0.049	mg/Kg		07/03/24 15:36	07/09/24 01:43		1
Xylenes, Total	ND		0.098	mg/Kg		07/03/24 15:36	07/09/24 01:43		1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac	
4-Bromofluorobenzene (Surr)	91		48 - 145			07/03/24 15:36	07/09/24 01:43		1
Method: SW846 8015M/D - Diesel Range Organics (DRO) (GC)									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Diesel Range Organics [C10-C28]	10		9.5	mg/Kg		07/05/24 09:50	07/05/24 16:49		1
Motor Oil Range Organics [C28-C40]	ND		47	mg/Kg		07/05/24 09:50	07/05/24 16:49		1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac	
Di-n-octyl phthalate (Surr)	105		62 - 134			07/05/24 09:50	07/05/24 16:49		1
Method: EPA 300.0 - Anions, Ion Chromatography									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Chloride	ND		60	mg/Kg		07/08/24 12:29	07/08/24 21:43		20

Client Sample Results

Client: Vertex
Project/Site: Endurance Lariat Water Line

Job ID: 885-7337-1

Client Sample ID: BH24-24 2FT Lab Sample ID: 885-7337-23
Date Collected: 07/01/24 11:40 Matrix: Solid
Date Received: 07/03/24 08:10

Method: SW846 8015M/D - Gasoline Range Organics (GRO) (GC)									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Gasoline Range Organics [C6 - C10]	ND		4.8	mg/Kg		07/03/24 15:36	07/09/24 02:05		1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac	
4-Bromofluorobenzene (Surr)	98		35 - 166			07/03/24 15:36	07/09/24 02:05		1
Method: SW846 8021B - Volatile Organic Compounds (GC)									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Benzene	ND		0.024	mg/Kg		07/03/24 15:36	07/09/24 02:05		1
Ethylbenzene	ND		0.048	mg/Kg		07/03/24 15:36	07/09/24 02:05		1
Toluene	ND		0.048	mg/Kg		07/03/24 15:36	07/09/24 02:05		1
Xylenes, Total	ND		0.097	mg/Kg		07/03/24 15:36	07/09/24 02:05		1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac	
4-Bromofluorobenzene (Surr)	89		48 - 145			07/03/24 15:36	07/09/24 02:05		1
Method: SW846 8015M/D - Diesel Range Organics (DRO) (GC)									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Diesel Range Organics [C10-C28]	ND		9.6	mg/Kg		07/05/24 09:50	07/05/24 16:59		1
Motor Oil Range Organics [C28-C40]	ND		48	mg/Kg		07/05/24 09:50	07/05/24 16:59		1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac	
Di-n-octyl phthalate (Surr)	106		62 - 134			07/05/24 09:50	07/05/24 16:59		1
Method: EPA 300.0 - Anions, Ion Chromatography									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Chloride	ND		59	mg/Kg		07/08/24 12:29	07/08/24 22:22		20

Client Sample Results

Client: Vertex
Project/Site: Endurance Lariat Water Line

Job ID: 885-7337-1

Client Sample ID: BH24-24 4FT Lab Sample ID: 885-7337-24
Date Collected: 07/01/24 11:50 Matrix: Solid
Date Received: 07/03/24 08:10

Method: SW846 8015M/D - Gasoline Range Organics (GRO) (GC)									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Gasoline Range Organics [C6 - C10]	ND		4.8	mg/Kg		07/03/24 15:36	07/09/24 02:27	1	
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac	
4-Bromofluorobenzene (Surr)	92		35 - 166			07/03/24 15:36	07/09/24 02:27	1	

Method: SW846 8021B - Volatile Organic Compounds (GC)									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Benzene	ND		0.024	mg/Kg		07/03/24 15:36	07/09/24 02:27	1	
Ethylbenzene	ND		0.048	mg/Kg		07/03/24 15:36	07/09/24 02:27	1	
Toluene	ND		0.048	mg/Kg		07/03/24 15:36	07/09/24 02:27	1	
Xylenes, Total	ND		0.096	mg/Kg		07/03/24 15:36	07/09/24 02:27	1	
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac	
4-Bromofluorobenzene (Surr)	90		48 - 145			07/03/24 15:36	07/09/24 02:27	1	

Method: SW846 8015M/D - Diesel Range Organics (DRO) (GC)									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Diesel Range Organics [C10-C28]	ND		10	mg/Kg		07/05/24 09:50	07/05/24 17:10	1	
Motor Oil Range Organics [C28-C40]	ND		50	mg/Kg		07/05/24 09:50	07/05/24 17:10	1	
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac	
Di-n-octyl phthalate (Surr)	108		62 - 134			07/05/24 09:50	07/05/24 17:10	1	

Method: EPA 300.0 - Anions, Ion Chromatography									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Chloride	ND		60	mg/Kg		07/08/24 12:29	07/08/24 22:35	20	

Client Sample Results

Client: Vertex
Project/Site: Endurance Lariat Water Line

Job ID: 885-7337-1

Client Sample ID: BH24-25 0FT Lab Sample ID: 885-7337-25
Date Collected: 07/01/24 12:00 Matrix: Solid
Date Received: 07/03/24 08:10

Method: SW846 8015M/D - Gasoline Range Organics (GRO) (GC)									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Gasoline Range Organics [C6 - C10]	ND		5.0	mg/Kg		07/03/24 15:51	07/09/24 03:10		1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac	
4-Bromofluorobenzene (Surr)	94		35 - 166			07/03/24 15:51	07/09/24 03:10		1
Method: SW846 8021B - Volatile Organic Compounds (GC)									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Benzene	ND		0.025	mg/Kg		07/03/24 15:51	07/09/24 03:10		1
Ethylbenzene	ND		0.050	mg/Kg		07/03/24 15:51	07/09/24 03:10		1
Toluene	ND		0.050	mg/Kg		07/03/24 15:51	07/09/24 03:10		1
Xylenes, Total	ND		0.099	mg/Kg		07/03/24 15:51	07/09/24 03:10		1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac	
4-Bromofluorobenzene (Surr)	90		48 - 145			07/03/24 15:51	07/09/24 03:10		1
Method: SW846 8015M/D - Diesel Range Organics (DRO) (GC)									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Diesel Range Organics [C10-C28]	ND		9.1	mg/Kg		07/05/24 09:50	07/05/24 17:21		1
Motor Oil Range Organics [C28-C40]	ND		46	mg/Kg		07/05/24 09:50	07/05/24 17:21		1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac	
Di-n-octyl phthalate (Surr)	89		62 - 134			07/05/24 09:50	07/05/24 17:21		1
Method: EPA 300.0 - Anions, Ion Chromatography									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Chloride	ND		60	mg/Kg		07/08/24 12:29	07/08/24 22:48		20

Client Sample Results

Client: Vertex
Project/Site: Endurance Lariat Water Line

Job ID: 885-7337-1

Client Sample ID: BH24-25 2FT

Lab Sample ID: 885-7337-26

Date Collected: 07/01/24 12:10

Matrix: Solid

Date Received: 07/03/24 08:10

Method: SW846 8015M/D - Gasoline Range Organics (GRO) (GC)									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Gasoline Range Organics [C6 - C10]	ND		4.8	mg/Kg		07/03/24 15:51	07/09/24 03:32	1	
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac	
4-Bromofluorobenzene (Surr)	94		35 - 166			07/03/24 15:51	07/09/24 03:32	1	
Method: SW846 8021B - Volatile Organic Compounds (GC)									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Benzene	ND		0.024	mg/Kg		07/03/24 15:51	07/09/24 03:32	1	
Ethylbenzene	ND		0.048	mg/Kg		07/03/24 15:51	07/09/24 03:32	1	
Toluene	ND		0.048	mg/Kg		07/03/24 15:51	07/09/24 03:32	1	
Xylenes, Total	ND		0.096	mg/Kg		07/03/24 15:51	07/09/24 03:32	1	
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac	
4-Bromofluorobenzene (Surr)	88		48 - 145			07/03/24 15:51	07/09/24 03:32	1	
Method: SW846 8015M/D - Diesel Range Organics (DRO) (GC)									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Diesel Range Organics [C10-C28]	ND		10	mg/Kg		07/05/24 09:50	07/05/24 17:32	1	
Motor Oil Range Organics [C28-C40]	ND		50	mg/Kg		07/05/24 09:50	07/05/24 17:32	1	
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac	
Di-n-octyl phthalate (Surr)	87		62 - 134			07/05/24 09:50	07/05/24 17:32	1	
Method: EPA 300.0 - Anions, Ion Chromatography									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Chloride	ND		60	mg/Kg		07/08/24 12:29	07/08/24 23:00	20	

Client Sample Results

Client: Vertex
Project/Site: Endurance Lariat Water Line

Job ID: 885-7337-1

Client Sample ID: BH24-25 4FT Lab Sample ID: 885-7337-27
Date Collected: 07/01/24 12:20 Matrix: Solid
Date Received: 07/03/24 08:10

Method: SW846 8015M/D - Gasoline Range Organics (GRO) (GC)									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Gasoline Range Organics [C6 - C10]	ND		5.0	mg/Kg		07/03/24 15:51	07/09/24 03:54		1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac	
4-Bromofluorobenzene (Surr)	88		35 - 166			07/03/24 15:51	07/09/24 03:54		1
Method: SW846 8021B - Volatile Organic Compounds (GC)									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Benzene	ND		0.025	mg/Kg		07/03/24 15:51	07/09/24 03:54		1
Ethylbenzene	ND		0.050	mg/Kg		07/03/24 15:51	07/09/24 03:54		1
Toluene	ND		0.050	mg/Kg		07/03/24 15:51	07/09/24 03:54		1
Xylenes, Total	ND		0.10	mg/Kg		07/03/24 15:51	07/09/24 03:54		1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac	
4-Bromofluorobenzene (Surr)	90		48 - 145			07/03/24 15:51	07/09/24 03:54		1
Method: SW846 8015M/D - Diesel Range Organics (DRO) (GC)									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Diesel Range Organics [C10-C28]	ND		9.3	mg/Kg		07/05/24 09:50	07/05/24 17:43		1
Motor Oil Range Organics [C28-C40]	ND		47	mg/Kg		07/05/24 09:50	07/05/24 17:43		1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac	
Di-n-octyl phthalate (Surr)	91		62 - 134			07/05/24 09:50	07/05/24 17:43		1
Method: EPA 300.0 - Anions, Ion Chromatography									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Chloride	ND		60	mg/Kg		07/08/24 12:29	07/08/24 23:13		20

QC Sample Results

Client: Vertex

Job ID: 885-7337-1

Project/Site: Endurance Lariat Water Line

Method: 8015M/D - Gasoline Range Organics (GRO) (GC)

Lab Sample ID: MB 885-7846/1-A

Matrix: Solid

Analysis Batch: 8101

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 7846

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics [C6 - C10]	ND		5.0	mg/Kg		07/03/24 08:25	07/08/24 10:26	1
Surrogate	MB %Recovery	MB Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	95		35 - 166			07/03/24 08:25	07/08/24 10:26	1

Lab Sample ID: MB 885-7870/1-A

Matrix: Solid

Analysis Batch: 7988

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 7870

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics [C6 - C10]	ND		5.0	mg/Kg		07/03/24 10:43	07/06/24 00:02	1
Surrogate	MB %Recovery	MB Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	94		35 - 166			07/03/24 10:43	07/06/24 00:02	1

Lab Sample ID: LCS 885-7870/2-A

Matrix: Solid

Analysis Batch: 7988

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 7870

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics [C6 - C10]	25.0	22.8		mg/Kg		91	70 - 130
Surrogate	LCS %Recovery	LCS Qualifier	Limits				
4-Bromofluorobenzene (Surr)	201	S1+	35 - 166				

Lab Sample ID: MB 885-7886/1-A

Matrix: Solid

Analysis Batch: 8101

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 7886

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics [C6 - C10]	ND		5.0	mg/Kg		07/03/24 15:36	07/08/24 21:21	1
Surrogate	MB %Recovery	MB Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	93		35 - 166			07/03/24 15:36	07/08/24 21:21	1

Lab Sample ID: LCS 885-7886/3-A

Matrix: Solid

Analysis Batch: 8101

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 7886

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics [C6 - C10]	25.0	24.0		mg/Kg		96	70 - 130
Surrogate	LCS %Recovery	LCS Qualifier	Limits				
4-Bromofluorobenzene (Surr)	203	S1+	35 - 166				

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QC Sample Results

Client: Vertex

Job ID: 885-7337-1

Project/Site: Endurance Lariat Water Line

Method: 8015M/D - Gasoline Range Organics (GRO) (GC) (Continued)

Lab Sample ID: 885-7337-15 MS

Matrix: Solid

Analysis Batch: 8101

Client Sample ID: BH24-21 4FT

Prep Type: Total/NA

Prep Batch: 7886

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics [C6 - C10]	ND		24.8	22.7		mg/Kg		92	70 - 130

Surrogate	MS %Recovery	MS Qualifier	Limits
4-Bromofluorobenzene (Surr)	197	S1+	35 - 166

Lab Sample ID: 885-7337-15 MSD

Matrix: Solid

Analysis Batch: 8101

Client Sample ID: BH24-21 4FT

Prep Type: Total/NA

Prep Batch: 7886

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics [C6 - C10]	ND		24.7	20.5		mg/Kg		83	70 - 130	10	20

Surrogate	MSD %Recovery	MSD Qualifier	Limits
4-Bromofluorobenzene (Surr)	194	S1+	35 - 166

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 885-7870/1-A

Matrix: Solid

Analysis Batch: 7946

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 7870

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.025	mg/Kg		07/03/24 10:43	07/06/24 00:02	1
Ethylbenzene	ND		0.050	mg/Kg		07/03/24 10:43	07/06/24 00:02	1
Toluene	ND		0.050	mg/Kg		07/03/24 10:43	07/06/24 00:02	1
Xylenes, Total	ND		0.10	mg/Kg		07/03/24 10:43	07/06/24 00:02	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	88		48 - 145	07/03/24 10:43	07/06/24 00:02	1

Lab Sample ID: LCS 885-7870/3-A

Matrix: Solid

Analysis Batch: 7946

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 7870

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	1.00	0.873		mg/Kg		87	70 - 130
Ethylbenzene	1.00	0.803		mg/Kg		80	70 - 130
m,p-Xylene	2.00	1.64		mg/Kg		82	70 - 130
o-Xylene	1.00	0.792		mg/Kg		79	70 - 130
Toluene	1.00	0.806		mg/Kg		81	70 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene (Surr)	87		48 - 145

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QC Sample Results

Client: Vertex

Job ID: 885-7337-1

Project/Site: Endurance Lariat Water Line

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

Lab Sample ID: MB 885-7886/1-A

Matrix: Solid

Analysis Batch: 8102

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 7886

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.025	mg/Kg		07/03/24 15:36	07/08/24 21:21	1
Ethylbenzene	ND		0.050	mg/Kg		07/03/24 15:36	07/08/24 21:21	1
Toluene	ND		0.050	mg/Kg		07/03/24 15:36	07/08/24 21:21	1
Xylenes, Total	ND		0.10	mg/Kg		07/03/24 15:36	07/08/24 21:21	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	88		48 - 145	07/03/24 15:36	07/08/24 21:21	1

Lab Sample ID: LCS 885-7886/4-A

Matrix: Solid

Analysis Batch: 8102

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 7886

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	1.00	0.920		mg/Kg		92	70 - 130
Ethylbenzene	1.00	0.921		mg/Kg		92	70 - 130
m,p-Xylene	2.00	1.84		mg/Kg		92	70 - 130
o-Xylene	1.00	0.930		mg/Kg		93	70 - 130
Toluene	1.00	0.909		mg/Kg		91	70 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene (Surr)	89		48 - 145

Lab Sample ID: 885-7337-16 MS

Matrix: Solid

Analysis Batch: 8102

Client Sample ID: BH24-22 0FT

Prep Type: Total/NA

Prep Batch: 7886

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	ND		0.991	0.914		mg/Kg		92	70 - 130
Ethylbenzene	ND		0.991	0.923		mg/Kg		93	70 - 130
m,p-Xylene	ND		1.98	1.84		mg/Kg		93	70 - 130
o-Xylene	ND		0.991	0.920		mg/Kg		93	70 - 130
Toluene	ND		0.991	0.916		mg/Kg		92	70 - 130

Surrogate	MS %Recovery	MS Qualifier	Limits
4-Bromofluorobenzene (Surr)	90		48 - 145

Lab Sample ID: 885-7337-16 MSD

Matrix: Solid

Analysis Batch: 8102

Client Sample ID: BH24-22 0FT

Prep Type: Total/NA

Prep Batch: 7886

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	Limit
Benzene	ND		0.992	0.906		mg/Kg		91	70 - 130	1	20
Ethylbenzene	ND		0.992	0.922		mg/Kg		93	70 - 130	0	20
m,p-Xylene	ND		1.98	1.84		mg/Kg		93	70 - 130	0	20
o-Xylene	ND		0.992	0.928		mg/Kg		94	70 - 130	1	20
Toluene	ND		0.992	0.918		mg/Kg		93	70 - 130	0	20

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QC Sample Results

Client: Vertex
Project/Site: Endurance Lariat Water Line

Job ID: 885-7337-1

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

Lab Sample ID: 885-7337-16 MSD
Matrix: Solid
Analysis Batch: 8102

Client Sample ID: BH24-22 0FT
Prep Type: Total/NA
Prep Batch: 7886

	MSD	MSD	
Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	91		48 - 145

Method: 8015M/D - Diesel Range Organics (DRO) (GC)

Lab Sample ID: MB 885-7885/1-A
Matrix: Solid
Analysis Batch: 7876

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 7885

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		10	mg/Kg		07/03/24 15:14	07/03/24 22:30	1
Motor Oil Range Organics [C28-C40]	ND		50	mg/Kg		07/03/24 15:14	07/03/24 22:30	1
Surrogate	MB %Recovery	MB Qualifier	Limits			Prepared	Analyzed	Dil Fac
Di-n-octyl phthalate (Surr)	86		62 - 134			07/03/24 15:14	07/03/24 22:30	1

Lab Sample ID: LCS 885-7885/2-A
Matrix: Solid
Analysis Batch: 7876

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 7885

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Diesel Range Organics [C10-C28]	50.0	47.6		mg/Kg		95	60 - 135
Surrogate	LCS %Recovery	LCS Qualifier	Limits				
Di-n-octyl phthalate (Surr)	91		62 - 134				

Lab Sample ID: 885-7337-14 MS
Matrix: Solid
Analysis Batch: 7876

Client Sample ID: BH24-21 2FT
Prep Type: Total/NA
Prep Batch: 7885

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Diesel Range Organics [C10-C28]	ND		44.1	41.6		mg/Kg		94	44 - 136
Surrogate	MS %Recovery	MS Qualifier	Limits						
Di-n-octyl phthalate (Surr)	92		62 - 134						

Lab Sample ID: 885-7337-14 MSD
Matrix: Solid
Analysis Batch: 7876

Client Sample ID: BH24-21 2FT
Prep Type: Total/NA
Prep Batch: 7885

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Diesel Range Organics [C10-C28]	ND		46.3	44.3		mg/Kg		96	44 - 136	6	32
Surrogate	MSD %Recovery	MSD Qualifier	Limits								
Di-n-octyl phthalate (Surr)	90		62 - 134								

QC Sample Results

Client: Vertex

Project/Site: Endurance Lariat Water Line

Job ID: 885-7337-1

Method: 8015M/D - Diesel Range Organics (DRO) (GC) (Continued)

Lab Sample ID: MB 885-7934/1-A						Client Sample ID: Method Blank			
Matrix: Solid						Prep Type: Total/NA			
Analysis Batch: 7925						Prep Batch: 7934			
Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Diesel Range Organics [C10-C28]	ND		10	mg/Kg		07/05/24 09:50	07/05/24 14:26	1	
Motor Oil Range Organics [C28-C40]	ND		50	mg/Kg		07/05/24 09:50	07/05/24 14:26	1	
Surrogate	MB %Recovery	MB Qualifier	Limits			Prepared	Analyzed	Dil Fac	
Di-n-octyl phthalate (Surr)	91		62 - 134			07/05/24 09:50	07/05/24 14:26	1	

Lab Sample ID: LCS 885-7934/2-A						Client Sample ID: Lab Control Sample			
Matrix: Solid						Prep Type: Total/NA			
Analysis Batch: 7925						Prep Batch: 7934			
Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Diesel Range Organics [C10-C28]			50.0	49.4		mg/Kg		99	60 - 135
Surrogate	LCS %Recovery	LCS Qualifier	Limits						
Di-n-octyl phthalate (Surr)	93		62 - 134						

Lab Sample ID: 885-7337-27 MS						Client Sample ID: BH24-25 4FT			
Matrix: Solid						Prep Type: Total/NA			
Analysis Batch: 7925						Prep Batch: 7934			
Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Diesel Range Organics [C10-C28]	ND		49.5	48.3		mg/Kg		98	44 - 136
Surrogate	MS %Recovery	MS Qualifier	Limits						
Di-n-octyl phthalate (Surr)	97		62 - 134						

Lab Sample ID: 885-7337-27 MSD								Client Sample ID: BH24-25 4FT			
Matrix: Solid								Prep Type: Total/NA			
Analysis Batch: 7925								Prep Batch: 7934			
Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Diesel Range Organics [C10-C28]	ND		49.2	49.1		mg/Kg		100	44 - 136	2	32
Surrogate	MSD %Recovery	MSD Qualifier	Limits								
Di-n-octyl phthalate (Surr)	95		62 - 134								

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 885-7952/1-A						Client Sample ID: Method Blank			
Matrix: Solid						Prep Type: Total/NA			
Analysis Batch: 8024						Prep Batch: 7952			
Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Chloride	ND		3.0	mg/Kg		07/05/24 15:35	07/05/24 17:03	1	

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QC Sample Results

Client: Vertex

Job ID: 885-7337-1

Project/Site: Endurance Lariat Water Line

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: LCS 885-7952/2-A

Matrix: Solid

Analysis Batch: 8024

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 7952

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	30.0	28.2		mg/Kg		94	90 - 110

Lab Sample ID: 885-7337-5 MS

Matrix: Solid

Analysis Batch: 8024

Client Sample ID: BH24-18 2FT

Prep Type: Total/NA

Prep Batch: 7952

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	ND		29.9	ND		mg/Kg		NC	50 - 150

Lab Sample ID: 885-7337-5 MSD

Matrix: Solid

Analysis Batch: 8024

Client Sample ID: BH24-18 2FT

Prep Type: Total/NA

Prep Batch: 7952

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	ND		29.8	ND		mg/Kg		NC	50 - 150	NC	20

Lab Sample ID: MB 885-8025/1-A

Matrix: Solid

Analysis Batch: 8052

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 8025

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		3.0	mg/Kg		07/08/24 12:29	07/08/24 15:56	1

Lab Sample ID: LCS 885-8025/2-A

Matrix: Solid

Analysis Batch: 8052

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 8025

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	30.0	31.0		mg/Kg		103	90 - 110

Lab Sample ID: MRL 885-8025/20-A

Matrix: Solid

Analysis Batch: 8052

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 8025

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	3.00	3.40		mg/L		113	50 - 150

Lab Sample ID: 885-7337-16 MS

Matrix: Solid

Analysis Batch: 8052

Client Sample ID: BH24-22 0FT

Prep Type: Total/NA

Prep Batch: 8025

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	97		30.0	124		mg/Kg		89	50 - 150

Lab Sample ID: 885-7337-16 MSD

Matrix: Solid

Analysis Batch: 8052

Client Sample ID: BH24-22 0FT

Prep Type: Total/NA

Prep Batch: 8025

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	97		29.8	141		mg/Kg		146	50 - 150	13	20

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QC Sample Results

Client: Vertex
Project/Site: Endurance Lariat Water Line

Job ID: 885-7337-1

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: 885-7337-17 MS

Client Sample ID: BH24-22 2FT

Matrix: Solid

Prep Type: Total/NA

Analysis Batch: 8052

Prep Batch: 8025

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	ND		29.8	ND		mg/Kg		NC	50 - 150

Lab Sample ID: 885-7337-17 MSD

Client Sample ID: BH24-22 2FT

Matrix: Solid

Prep Type: Total/NA

Analysis Batch: 8052

Prep Batch: 8025

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	ND		30.1	ND		mg/Kg		NC	50 - 150	NC	20

QC Association Summary

Client: Vertex

Job ID: 885-7337-1

Project/Site: Endurance Lariat Water Line

GC VOA

Prep Batch: 7846

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 885-7846/1-A	Method Blank	Total/NA	Solid	5030C	

Prep Batch: 7870

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-7337-1	BH24-26 0FT	Total/NA	Solid	5030C	
885-7337-2	BH24-26 2FT	Total/NA	Solid	5030C	
885-7337-3	BH24-26 4FT	Total/NA	Solid	5030C	
885-7337-4	BH24-18 0FT	Total/NA	Solid	5030C	
885-7337-5	BH24-18 2FT	Total/NA	Solid	5030C	
885-7337-6	BH24-18 4FT	Total/NA	Solid	5030C	
885-7337-7	BH24-19 0FT	Total/NA	Solid	5030C	
885-7337-8	BH24-19 2FT	Total/NA	Solid	5030C	
885-7337-9	BH24-19 4FT	Total/NA	Solid	5030C	
885-7337-10	BH24-20 0FT	Total/NA	Solid	5030C	
885-7337-11	BH24-20 2FT	Total/NA	Solid	5030C	
885-7337-12	BH24-20 4FT	Total/NA	Solid	5030C	
885-7337-13	BH24-21 0FT	Total/NA	Solid	5030C	
885-7337-14	BH24-21 2FT	Total/NA	Solid	5030C	
MB 885-7870/1-A	Method Blank	Total/NA	Solid	5030C	
LCS 885-7870/2-A	Lab Control Sample	Total/NA	Solid	5030C	
LCS 885-7870/3-A	Lab Control Sample	Total/NA	Solid	5030C	

Prep Batch: 7886

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-7337-15	BH24-21 4FT	Total/NA	Solid	5030C	
885-7337-16	BH24-22 0FT	Total/NA	Solid	5030C	
885-7337-17	BH24-22 2FT	Total/NA	Solid	5030C	
885-7337-18	BH24-22 4FT	Total/NA	Solid	5030C	
885-7337-19	BH24-23 0FT	Total/NA	Solid	5030C	
885-7337-20	BH24-23 2FT	Total/NA	Solid	5030C	
885-7337-21	BH24-23 4FT	Total/NA	Solid	5030C	
885-7337-22	BH24-24 0FT	Total/NA	Solid	5030C	
885-7337-23	BH24-24 2FT	Total/NA	Solid	5030C	
885-7337-24	BH24-24 4FT	Total/NA	Solid	5030C	
885-7337-25	BH24-25 0FT	Total/NA	Solid	5030C	
885-7337-26	BH24-25 2FT	Total/NA	Solid	5030C	
885-7337-27	BH24-25 4FT	Total/NA	Solid	5030C	
MB 885-7886/1-A	Method Blank	Total/NA	Solid	5030C	
LCS 885-7886/3-A	Lab Control Sample	Total/NA	Solid	5030C	
LCS 885-7886/4-A	Lab Control Sample	Total/NA	Solid	5030C	
885-7337-15 MS	BH24-21 4FT	Total/NA	Solid	5030C	
885-7337-15 MSD	BH24-21 4FT	Total/NA	Solid	5030C	
885-7337-16 MS	BH24-22 0FT	Total/NA	Solid	5030C	
885-7337-16 MSD	BH24-22 0FT	Total/NA	Solid	5030C	

Analysis Batch: 7946

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-7337-1	BH24-26 0FT	Total/NA	Solid	8021B	7870
885-7337-2	BH24-26 2FT	Total/NA	Solid	8021B	7870
885-7337-3	BH24-26 4FT	Total/NA	Solid	8021B	7870
885-7337-4	BH24-18 0FT	Total/NA	Solid	8021B	7870

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QC Association Summary

Client: Vertex

Job ID: 885-7337-1

GC VOA (Continued)

Analysis Batch: 7946 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-7337-5	BH24-18 2FT	Total/NA	Solid	8021B	7870
885-7337-6	BH24-18 4FT	Total/NA	Solid	8021B	7870
885-7337-7	BH24-19 0FT	Total/NA	Solid	8021B	7870
885-7337-8	BH24-19 2FT	Total/NA	Solid	8021B	7870
885-7337-9	BH24-19 4FT	Total/NA	Solid	8021B	7870
885-7337-10	BH24-20 0FT	Total/NA	Solid	8021B	7870
885-7337-11	BH24-20 2FT	Total/NA	Solid	8021B	7870
885-7337-12	BH24-20 4FT	Total/NA	Solid	8021B	7870
885-7337-13	BH24-21 0FT	Total/NA	Solid	8021B	7870
885-7337-14	BH24-21 2FT	Total/NA	Solid	8021B	7870
MB 885-7870/1-A	Method Blank	Total/NA	Solid	8021B	7870
LCS 885-7870/3-A	Lab Control Sample	Total/NA	Solid	8021B	7870

Analysis Batch: 7988

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-7337-1	BH24-26 0FT	Total/NA	Solid	8015M/D	7870
885-7337-2	BH24-26 2FT	Total/NA	Solid	8015M/D	7870
885-7337-3	BH24-26 4FT	Total/NA	Solid	8015M/D	7870
885-7337-4	BH24-18 0FT	Total/NA	Solid	8015M/D	7870
885-7337-5	BH24-18 2FT	Total/NA	Solid	8015M/D	7870
885-7337-6	BH24-18 4FT	Total/NA	Solid	8015M/D	7870
885-7337-7	BH24-19 0FT	Total/NA	Solid	8015M/D	7870
885-7337-8	BH24-19 2FT	Total/NA	Solid	8015M/D	7870
885-7337-9	BH24-19 4FT	Total/NA	Solid	8015M/D	7870
885-7337-10	BH24-20 0FT	Total/NA	Solid	8015M/D	7870
885-7337-11	BH24-20 2FT	Total/NA	Solid	8015M/D	7870
885-7337-12	BH24-20 4FT	Total/NA	Solid	8015M/D	7870
885-7337-13	BH24-21 0FT	Total/NA	Solid	8015M/D	7870
885-7337-14	BH24-21 2FT	Total/NA	Solid	8015M/D	7870
MB 885-7870/1-A	Method Blank	Total/NA	Solid	8015M/D	7870
LCS 885-7870/2-A	Lab Control Sample	Total/NA	Solid	8015M/D	7870

Analysis Batch: 8101

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-7337-15	BH24-21 4FT	Total/NA	Solid	8015M/D	7886
885-7337-16	BH24-22 0FT	Total/NA	Solid	8015M/D	7886
885-7337-17	BH24-22 2FT	Total/NA	Solid	8015M/D	7886
885-7337-18	BH24-22 4FT	Total/NA	Solid	8015M/D	7886
885-7337-19	BH24-23 0FT	Total/NA	Solid	8015M/D	7886
885-7337-20	BH24-23 2FT	Total/NA	Solid	8015M/D	7886
885-7337-21	BH24-23 4FT	Total/NA	Solid	8015M/D	7886
885-7337-22	BH24-24 0FT	Total/NA	Solid	8015M/D	7886
885-7337-23	BH24-24 2FT	Total/NA	Solid	8015M/D	7886
885-7337-24	BH24-24 4FT	Total/NA	Solid	8015M/D	7886
885-7337-25	BH24-25 0FT	Total/NA	Solid	8015M/D	7886
885-7337-26	BH24-25 2FT	Total/NA	Solid	8015M/D	7886
885-7337-27	BH24-25 4FT	Total/NA	Solid	8015M/D	7886
MB 885-7846/1-A	Method Blank	Total/NA	Solid	8015M/D	7846
MB 885-7886/1-A	Method Blank	Total/NA	Solid	8015M/D	7886
LCS 885-7886/3-A	Lab Control Sample	Total/NA	Solid	8015M/D	7886
885-7337-15 MS	BH24-21 4FT	Total/NA	Solid	8015M/D	7886

Eurofins Albuquerque

QC Association Summary

Client: Vertex

Job ID: 885-7337-1

Project/Site: Endurance Lariat Water Line

GC VOA (Continued)

Analysis Batch: 8101 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-7337-15 MSD	BH24-21 4FT	Total/NA	Solid	8015M/D	7886

Analysis Batch: 8102

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-7337-15	BH24-21 4FT	Total/NA	Solid	8021B	7886
885-7337-16	BH24-22 0FT	Total/NA	Solid	8021B	7886
885-7337-17	BH24-22 2FT	Total/NA	Solid	8021B	7886
885-7337-18	BH24-22 4FT	Total/NA	Solid	8021B	7886
885-7337-19	BH24-23 0FT	Total/NA	Solid	8021B	7886
885-7337-20	BH24-23 2FT	Total/NA	Solid	8021B	7886
885-7337-21	BH24-23 4FT	Total/NA	Solid	8021B	7886
885-7337-22	BH24-24 0FT	Total/NA	Solid	8021B	7886
885-7337-23	BH24-24 2FT	Total/NA	Solid	8021B	7886
885-7337-24	BH24-24 4FT	Total/NA	Solid	8021B	7886
885-7337-25	BH24-25 0FT	Total/NA	Solid	8021B	7886
885-7337-26	BH24-25 2FT	Total/NA	Solid	8021B	7886
885-7337-27	BH24-25 4FT	Total/NA	Solid	8021B	7886
MB 885-7886/1-A	Method Blank	Total/NA	Solid	8021B	7886
LCS 885-7886/4-A	Lab Control Sample	Total/NA	Solid	8021B	7886
885-7337-16 MS	BH24-22 0FT	Total/NA	Solid	8021B	7886
885-7337-16 MSD	BH24-22 0FT	Total/NA	Solid	8021B	7886

GC Semi VOA

Analysis Batch: 7876

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-7337-1	BH24-26 0FT	Total/NA	Solid	8015M/D	7885
885-7337-2	BH24-26 2FT	Total/NA	Solid	8015M/D	7885
885-7337-3	BH24-26 4FT	Total/NA	Solid	8015M/D	7885
885-7337-4	BH24-18 0FT	Total/NA	Solid	8015M/D	7885
885-7337-5	BH24-18 2FT	Total/NA	Solid	8015M/D	7885
885-7337-6	BH24-18 4FT	Total/NA	Solid	8015M/D	7885
885-7337-7	BH24-19 0FT	Total/NA	Solid	8015M/D	7885
885-7337-8	BH24-19 2FT	Total/NA	Solid	8015M/D	7885
885-7337-9	BH24-19 4FT	Total/NA	Solid	8015M/D	7885
885-7337-10	BH24-20 0FT	Total/NA	Solid	8015M/D	7885
885-7337-11	BH24-20 2FT	Total/NA	Solid	8015M/D	7885
885-7337-12	BH24-20 4FT	Total/NA	Solid	8015M/D	7885
885-7337-13	BH24-21 0FT	Total/NA	Solid	8015M/D	7885
885-7337-14	BH24-21 2FT	Total/NA	Solid	8015M/D	7885
MB 885-7885/1-A	Method Blank	Total/NA	Solid	8015M/D	7885
LCS 885-7885/2-A	Lab Control Sample	Total/NA	Solid	8015M/D	7885
885-7337-14 MS	BH24-21 2FT	Total/NA	Solid	8015M/D	7885
885-7337-14 MSD	BH24-21 2FT	Total/NA	Solid	8015M/D	7885

Prep Batch: 7885

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-7337-1	BH24-26 0FT	Total/NA	Solid	SHAKE	
885-7337-2	BH24-26 2FT	Total/NA	Solid	SHAKE	
885-7337-3	BH24-26 4FT	Total/NA	Solid	SHAKE	
885-7337-4	BH24-18 0FT	Total/NA	Solid	SHAKE	

Eurofins Albuquerque

QC Association Summary

Client: Vertex

Job ID: 885-7337-1

GC Semi VOA (Continued)

Prep Batch: 7885 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-7337-5	BH24-18 2FT	Total/NA	Solid	SHAKE	
885-7337-6	BH24-18 4FT	Total/NA	Solid	SHAKE	
885-7337-7	BH24-19 0FT	Total/NA	Solid	SHAKE	
885-7337-8	BH24-19 2FT	Total/NA	Solid	SHAKE	
885-7337-9	BH24-19 4FT	Total/NA	Solid	SHAKE	
885-7337-10	BH24-20 0FT	Total/NA	Solid	SHAKE	
885-7337-11	BH24-20 2FT	Total/NA	Solid	SHAKE	
885-7337-12	BH24-20 4FT	Total/NA	Solid	SHAKE	
885-7337-13	BH24-21 0FT	Total/NA	Solid	SHAKE	
885-7337-14	BH24-21 2FT	Total/NA	Solid	SHAKE	
MB 885-7885/1-A	Method Blank	Total/NA	Solid	SHAKE	
LCS 885-7885/2-A	Lab Control Sample	Total/NA	Solid	SHAKE	
885-7337-14 MS	BH24-21 2FT	Total/NA	Solid	SHAKE	
885-7337-14 MSD	BH24-21 2FT	Total/NA	Solid	SHAKE	

Analysis Batch: 7925

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-7337-15	BH24-21 4FT	Total/NA	Solid	8015M/D	7934
885-7337-16	BH24-22 0FT	Total/NA	Solid	8015M/D	7934
885-7337-17	BH24-22 2FT	Total/NA	Solid	8015M/D	7934
885-7337-18	BH24-22 4FT	Total/NA	Solid	8015M/D	7934
885-7337-19	BH24-23 0FT	Total/NA	Solid	8015M/D	7934
885-7337-20	BH24-23 2FT	Total/NA	Solid	8015M/D	7934
885-7337-21	BH24-23 4FT	Total/NA	Solid	8015M/D	7934
885-7337-22	BH24-24 0FT	Total/NA	Solid	8015M/D	7934
885-7337-23	BH24-24 2FT	Total/NA	Solid	8015M/D	7934
885-7337-24	BH24-24 4FT	Total/NA	Solid	8015M/D	7934
885-7337-25	BH24-25 0FT	Total/NA	Solid	8015M/D	7934
885-7337-26	BH24-25 2FT	Total/NA	Solid	8015M/D	7934
885-7337-27	BH24-25 4FT	Total/NA	Solid	8015M/D	7934
MB 885-7934/1-A	Method Blank	Total/NA	Solid	8015M/D	7934
LCS 885-7934/2-A	Lab Control Sample	Total/NA	Solid	8015M/D	7934
885-7337-27 MS	BH24-25 4FT	Total/NA	Solid	8015M/D	7934
885-7337-27 MSD	BH24-25 4FT	Total/NA	Solid	8015M/D	7934

Prep Batch: 7934

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-7337-15	BH24-21 4FT	Total/NA	Solid	SHAKE	
885-7337-16	BH24-22 0FT	Total/NA	Solid	SHAKE	
885-7337-17	BH24-22 2FT	Total/NA	Solid	SHAKE	
885-7337-18	BH24-22 4FT	Total/NA	Solid	SHAKE	
885-7337-19	BH24-23 0FT	Total/NA	Solid	SHAKE	
885-7337-20	BH24-23 2FT	Total/NA	Solid	SHAKE	
885-7337-21	BH24-23 4FT	Total/NA	Solid	SHAKE	
885-7337-22	BH24-24 0FT	Total/NA	Solid	SHAKE	
885-7337-23	BH24-24 2FT	Total/NA	Solid	SHAKE	
885-7337-24	BH24-24 4FT	Total/NA	Solid	SHAKE	
885-7337-25	BH24-25 0FT	Total/NA	Solid	SHAKE	
885-7337-26	BH24-25 2FT	Total/NA	Solid	SHAKE	
885-7337-27	BH24-25 4FT	Total/NA	Solid	SHAKE	
MB 885-7934/1-A	Method Blank	Total/NA	Solid	SHAKE	

Eurofins Albuquerque

QC Association Summary

Client: Vertex

Job ID: 885-7337-1

Project/Site: Endurance Lariat Water Line

GC Semi VOA (Continued)

Prep Batch: 7934 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 885-7934/2-A	Lab Control Sample	Total/NA	Solid	SHAKE	
885-7337-27 MS	BH24-25 4FT	Total/NA	Solid	SHAKE	
885-7337-27 MSD	BH24-25 4FT	Total/NA	Solid	SHAKE	

HPLC/IC

Prep Batch: 7952

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-7337-1	BH24-26 0FT	Total/NA	Solid	300_Prep	
885-7337-2	BH24-26 2FT	Total/NA	Solid	300_Prep	
885-7337-3	BH24-26 4FT	Total/NA	Solid	300_Prep	
885-7337-4	BH24-18 0FT	Total/NA	Solid	300_Prep	
885-7337-5	BH24-18 2FT	Total/NA	Solid	300_Prep	
885-7337-6	BH24-18 4FT	Total/NA	Solid	300_Prep	
885-7337-7	BH24-19 0FT	Total/NA	Solid	300_Prep	
885-7337-8	BH24-19 2FT	Total/NA	Solid	300_Prep	
885-7337-9	BH24-19 4FT	Total/NA	Solid	300_Prep	
885-7337-10	BH24-20 0FT	Total/NA	Solid	300_Prep	
885-7337-11	BH24-20 2FT	Total/NA	Solid	300_Prep	
885-7337-12	BH24-20 4FT	Total/NA	Solid	300_Prep	
885-7337-13	BH24-21 0FT	Total/NA	Solid	300_Prep	
885-7337-14	BH24-21 2FT	Total/NA	Solid	300_Prep	
MB 885-7952/1-A	Method Blank	Total/NA	Solid	300_Prep	
LCS 885-7952/2-A	Lab Control Sample	Total/NA	Solid	300_Prep	
885-7337-5 MS	BH24-18 2FT	Total/NA	Solid	300_Prep	
885-7337-5 MSD	BH24-18 2FT	Total/NA	Solid	300_Prep	

Analysis Batch: 8024

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-7337-1	BH24-26 0FT	Total/NA	Solid	300.0	7952
885-7337-2	BH24-26 2FT	Total/NA	Solid	300.0	7952
885-7337-3	BH24-26 4FT	Total/NA	Solid	300.0	7952
885-7337-4	BH24-18 0FT	Total/NA	Solid	300.0	7952
885-7337-5	BH24-18 2FT	Total/NA	Solid	300.0	7952
885-7337-6	BH24-18 4FT	Total/NA	Solid	300.0	7952
885-7337-8	BH24-19 2FT	Total/NA	Solid	300.0	7952
885-7337-9	BH24-19 4FT	Total/NA	Solid	300.0	7952
885-7337-10	BH24-20 0FT	Total/NA	Solid	300.0	7952
885-7337-11	BH24-20 2FT	Total/NA	Solid	300.0	7952
885-7337-12	BH24-20 4FT	Total/NA	Solid	300.0	7952
885-7337-13	BH24-21 0FT	Total/NA	Solid	300.0	7952
885-7337-14	BH24-21 2FT	Total/NA	Solid	300.0	7952
MB 885-7952/1-A	Method Blank	Total/NA	Solid	300.0	7952
LCS 885-7952/2-A	Lab Control Sample	Total/NA	Solid	300.0	7952
885-7337-5 MS	BH24-18 2FT	Total/NA	Solid	300.0	7952
885-7337-5 MSD	BH24-18 2FT	Total/NA	Solid	300.0	7952

Prep Batch: 8025

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-7337-15	BH24-21 4FT	Total/NA	Solid	300_Prep	
885-7337-16	BH24-22 0FT	Total/NA	Solid	300_Prep	

Eurofins Albuquerque

QC Association Summary

Client: Vertex

Job ID: 885-7337-1

Project/Site: Endurance Lariat Water Line

HPLC/IC (Continued)

Prep Batch: 8025 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-7337-17	BH24-22 2FT	Total/NA	Solid	300_Prep	
885-7337-18	BH24-22 4FT	Total/NA	Solid	300_Prep	
885-7337-19	BH24-23 0FT	Total/NA	Solid	300_Prep	
885-7337-20	BH24-23 2FT	Total/NA	Solid	300_Prep	
885-7337-21	BH24-23 4FT	Total/NA	Solid	300_Prep	
885-7337-22	BH24-24 0FT	Total/NA	Solid	300_Prep	
885-7337-23	BH24-24 2FT	Total/NA	Solid	300_Prep	
885-7337-24	BH24-24 4FT	Total/NA	Solid	300_Prep	
885-7337-25	BH24-25 0FT	Total/NA	Solid	300_Prep	
885-7337-26	BH24-25 2FT	Total/NA	Solid	300_Prep	
885-7337-27	BH24-25 4FT	Total/NA	Solid	300_Prep	
MB 885-8025/1-A	Method Blank	Total/NA	Solid	300_Prep	
LCS 885-8025/2-A	Lab Control Sample	Total/NA	Solid	300_Prep	
MRL 885-8025/20-A	Lab Control Sample	Total/NA	Solid	300_Prep	
885-7337-16 MS	BH24-22 0FT	Total/NA	Solid	300_Prep	
885-7337-16 MSD	BH24-22 0FT	Total/NA	Solid	300_Prep	
885-7337-17 MS	BH24-22 2FT	Total/NA	Solid	300_Prep	
885-7337-17 MSD	BH24-22 2FT	Total/NA	Solid	300_Prep	

Analysis Batch: 8052

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-7337-7	BH24-19 0FT	Total/NA	Solid	300.0	7952
885-7337-15	BH24-21 4FT	Total/NA	Solid	300.0	8025
885-7337-16	BH24-22 0FT	Total/NA	Solid	300.0	8025
885-7337-17	BH24-22 2FT	Total/NA	Solid	300.0	8025
885-7337-18	BH24-22 4FT	Total/NA	Solid	300.0	8025
885-7337-19	BH24-23 0FT	Total/NA	Solid	300.0	8025
885-7337-20	BH24-23 2FT	Total/NA	Solid	300.0	8025
885-7337-21	BH24-23 4FT	Total/NA	Solid	300.0	8025
885-7337-22	BH24-24 0FT	Total/NA	Solid	300.0	8025
885-7337-23	BH24-24 2FT	Total/NA	Solid	300.0	8025
885-7337-24	BH24-24 4FT	Total/NA	Solid	300.0	8025
885-7337-25	BH24-25 0FT	Total/NA	Solid	300.0	8025
885-7337-26	BH24-25 2FT	Total/NA	Solid	300.0	8025
885-7337-27	BH24-25 4FT	Total/NA	Solid	300.0	8025
MB 885-8025/1-A	Method Blank	Total/NA	Solid	300.0	8025
LCS 885-8025/2-A	Lab Control Sample	Total/NA	Solid	300.0	8025
MRL 885-8025/20-A	Lab Control Sample	Total/NA	Solid	300.0	8025
885-7337-16 MS	BH24-22 0FT	Total/NA	Solid	300.0	8025
885-7337-16 MSD	BH24-22 0FT	Total/NA	Solid	300.0	8025
885-7337-17 MS	BH24-22 2FT	Total/NA	Solid	300.0	8025
885-7337-17 MSD	BH24-22 2FT	Total/NA	Solid	300.0	8025

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Lab Chronicle

Client: Vertex
Project/Site: Endurance Lariat Water Line

Job ID: 885-7337-1

Client Sample ID: BH24-26 0FT
Date Collected: 07/01/24 08:00
Date Received: 07/03/24 08:10

Lab Sample ID: 885-7337-1
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			7870	AT	EET ALB	07/03/24 10:43
Total/NA	Analysis	8015M/D		1	7988	JP	EET ALB	07/06/24 04:20
Total/NA	Prep	5030C			7870	AT	EET ALB	07/03/24 10:43
Total/NA	Analysis	8021B		1	7946	JP	EET ALB	07/06/24 04:20
Total/NA	Prep	SHAKE			7885	KR	EET ALB	07/03/24 15:14
Total/NA	Analysis	8015M/D		1	7876	PD	EET ALB	07/03/24 23:59
Total/NA	Prep	300_Prep			7952	JT	EET ALB	07/05/24 15:35
Total/NA	Analysis	300.0		20	8024	JT	EET ALB	07/05/24 19:31

Client Sample ID: BH24-26 2FT
Date Collected: 07/01/24 08:10
Date Received: 07/03/24 08:10

Lab Sample ID: 885-7337-2
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			7870	AT	EET ALB	07/03/24 10:43
Total/NA	Analysis	8015M/D		1	7988	JP	EET ALB	07/06/24 05:07
Total/NA	Prep	5030C			7870	AT	EET ALB	07/03/24 10:43
Total/NA	Analysis	8021B		1	7946	JP	EET ALB	07/06/24 05:07
Total/NA	Prep	SHAKE			7885	KR	EET ALB	07/03/24 15:14
Total/NA	Analysis	8015M/D		1	7876	PD	EET ALB	07/04/24 00:10
Total/NA	Prep	300_Prep			7952	JT	EET ALB	07/05/24 15:35
Total/NA	Analysis	300.0		20	8024	JT	EET ALB	07/05/24 19:44

Client Sample ID: BH24-26 4FT
Date Collected: 07/01/24 08:20
Date Received: 07/03/24 08:10

Lab Sample ID: 885-7337-3
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			7870	AT	EET ALB	07/03/24 10:43
Total/NA	Analysis	8015M/D		1	7988	JP	EET ALB	07/06/24 05:31
Total/NA	Prep	5030C			7870	AT	EET ALB	07/03/24 10:43
Total/NA	Analysis	8021B		1	7946	JP	EET ALB	07/06/24 05:31
Total/NA	Prep	SHAKE			7885	KR	EET ALB	07/03/24 15:14
Total/NA	Analysis	8015M/D		1	7876	PD	EET ALB	07/04/24 00:21
Total/NA	Prep	300_Prep			7952	JT	EET ALB	07/05/24 15:35
Total/NA	Analysis	300.0		20	8024	JT	EET ALB	07/05/24 19:56

Client Sample ID: BH24-18 0FT
Date Collected: 07/01/24 08:30
Date Received: 07/03/24 08:10

Lab Sample ID: 885-7337-4
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			7870	AT	EET ALB	07/03/24 10:43
Total/NA	Analysis	8015M/D		1	7988	JP	EET ALB	07/06/24 05:54

Eurofins Albuquerque

Lab Chronicle

Client: Vertex
Project/Site: Endurance Lariat Water Line

Job ID: 885-7337-1

Client Sample ID: BH24-18 0FT
Date Collected: 07/01/24 08:30
Date Received: 07/03/24 08:10

Lab Sample ID: 885-7337-4
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			7870	AT	EET ALB	07/03/24 10:43
Total/NA	Analysis	8021B		1	7946	JP	EET ALB	07/06/24 05:54
Total/NA	Prep	SHAKE			7885	KR	EET ALB	07/03/24 15:14
Total/NA	Analysis	8015M/D		1	7876	PD	EET ALB	07/04/24 00:43
Total/NA	Prep	300_Prep			7952	JT	EET ALB	07/05/24 15:35
Total/NA	Analysis	300.0		20	8024	JT	EET ALB	07/05/24 20:09

Client Sample ID: BH24-18 2FT
Date Collected: 07/01/24 08:40
Date Received: 07/03/24 08:10

Lab Sample ID: 885-7337-5
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			7870	AT	EET ALB	07/03/24 10:43
Total/NA	Analysis	8015M/D		1	7988	JP	EET ALB	07/06/24 06:17
Total/NA	Prep	5030C			7870	AT	EET ALB	07/03/24 10:43
Total/NA	Analysis	8021B		1	7946	JP	EET ALB	07/06/24 06:17
Total/NA	Prep	SHAKE			7885	KR	EET ALB	07/03/24 15:14
Total/NA	Analysis	8015M/D		1	7876	PD	EET ALB	07/04/24 00:55
Total/NA	Prep	300_Prep			7952	JT	EET ALB	07/05/24 15:35
Total/NA	Analysis	300.0		20	8024	JT	EET ALB	07/05/24 20:21

Client Sample ID: BH24-18 4FT
Date Collected: 07/01/24 08:50
Date Received: 07/03/24 08:10

Lab Sample ID: 885-7337-6
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			7870	AT	EET ALB	07/03/24 10:43
Total/NA	Analysis	8015M/D		1	7988	JP	EET ALB	07/06/24 06:41
Total/NA	Prep	5030C			7870	AT	EET ALB	07/03/24 10:43
Total/NA	Analysis	8021B		1	7946	JP	EET ALB	07/06/24 06:41
Total/NA	Prep	SHAKE			7885	KR	EET ALB	07/03/24 15:14
Total/NA	Analysis	8015M/D		1	7876	PD	EET ALB	07/04/24 01:06
Total/NA	Prep	300_Prep			7952	JT	EET ALB	07/05/24 15:35
Total/NA	Analysis	300.0		20	8024	JT	EET ALB	07/05/24 20:58

Client Sample ID: BH24-19 0FT
Date Collected: 07/01/24 09:00
Date Received: 07/03/24 08:10

Lab Sample ID: 885-7337-7
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			7870	AT	EET ALB	07/03/24 10:43
Total/NA	Analysis	8015M/D		1	7988	JP	EET ALB	07/06/24 07:04
Total/NA	Prep	5030C			7870	AT	EET ALB	07/03/24 10:43
Total/NA	Analysis	8021B		1	7946	JP	EET ALB	07/06/24 07:04

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Lab Chronicle

Client: Vertex
Project/Site: Endurance Lariat Water Line

Job ID: 885-7337-1

Client Sample ID: BH24-19 0FT
Date Collected: 07/01/24 09:00
Date Received: 07/03/24 08:10

Lab Sample ID: 885-7337-7
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	SHAKE			7885	KR	EET ALB	07/03/24 15:14
Total/NA	Analysis	8015M/D		1	7876	PD	EET ALB	07/04/24 01:17
Total/NA	Prep	300_Prep			7952	JT	EET ALB	07/05/24 15:35
Total/NA	Analysis	300.0		50	8052	JT	EET ALB	07/08/24 23:26

Client Sample ID: BH24-19 2FT
Date Collected: 07/01/24 09:10
Date Received: 07/03/24 08:10

Lab Sample ID: 885-7337-8
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			7870	AT	EET ALB	07/03/24 10:43
Total/NA	Analysis	8015M/D		1	7988	JP	EET ALB	07/06/24 07:28
Total/NA	Prep	5030C			7870	AT	EET ALB	07/03/24 10:43
Total/NA	Analysis	8021B		1	7946	JP	EET ALB	07/06/24 07:28
Total/NA	Prep	SHAKE			7885	KR	EET ALB	07/03/24 15:14
Total/NA	Analysis	8015M/D		1	7876	PD	EET ALB	07/04/24 01:29
Total/NA	Prep	300_Prep			7952	JT	EET ALB	07/05/24 15:35
Total/NA	Analysis	300.0		20	8024	JT	EET ALB	07/05/24 21:47

Client Sample ID: BH24-19 4FT
Date Collected: 07/01/24 09:20
Date Received: 07/03/24 08:10

Lab Sample ID: 885-7337-9
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			7870	AT	EET ALB	07/03/24 10:43
Total/NA	Analysis	8015M/D		1	7988	JP	EET ALB	07/06/24 07:52
Total/NA	Prep	5030C			7870	AT	EET ALB	07/03/24 10:43
Total/NA	Analysis	8021B		1	7946	JP	EET ALB	07/06/24 07:52
Total/NA	Prep	SHAKE			7885	KR	EET ALB	07/03/24 15:14
Total/NA	Analysis	8015M/D		1	7876	PD	EET ALB	07/04/24 01:40
Total/NA	Prep	300_Prep			7952	JT	EET ALB	07/05/24 15:35
Total/NA	Analysis	300.0		20	8024	JT	EET ALB	07/05/24 22:00

Client Sample ID: BH24-20 0FT
Date Collected: 07/01/24 09:30
Date Received: 07/03/24 08:10

Lab Sample ID: 885-7337-10
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			7870	AT	EET ALB	07/03/24 10:43
Total/NA	Analysis	8015M/D		1	7988	JP	EET ALB	07/06/24 08:15
Total/NA	Prep	5030C			7870	AT	EET ALB	07/03/24 10:43
Total/NA	Analysis	8021B		1	7946	JP	EET ALB	07/06/24 08:15
Total/NA	Prep	SHAKE			7885	KR	EET ALB	07/03/24 15:14
Total/NA	Analysis	8015M/D		1	7876	PD	EET ALB	07/04/24 01:51

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Lab Chronicle

Client: Vertex
Project/Site: Endurance Lariat Water Line

Job ID: 885-7337-1

Client Sample ID: BH24-20 0FT
Date Collected: 07/01/24 09:30
Date Received: 07/03/24 08:10

Lab Sample ID: 885-7337-10
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	300_Prep			7952	JT	EET ALB	07/05/24 15:35
Total/NA	Analysis	300.0		20	8024	JT	EET ALB	07/05/24 22:12

Client Sample ID: BH24-20 2FT
Date Collected: 07/01/24 09:40
Date Received: 07/03/24 08:10

Lab Sample ID: 885-7337-11
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			7870	AT	EET ALB	07/03/24 10:43
Total/NA	Analysis	8015M/D		1	7988	JP	EET ALB	07/06/24 08:39
Total/NA	Prep	5030C			7870	AT	EET ALB	07/03/24 10:43
Total/NA	Analysis	8021B		1	7946	JP	EET ALB	07/06/24 08:39
Total/NA	Prep	SHAKE			7885	KR	EET ALB	07/03/24 15:14
Total/NA	Analysis	8015M/D		1	7876	PD	EET ALB	07/04/24 02:03
Total/NA	Prep	300_Prep			7952	JT	EET ALB	07/05/24 15:35
Total/NA	Analysis	300.0		20	8024	JT	EET ALB	07/05/24 22:24

Client Sample ID: BH24-20 4FT
Date Collected: 07/01/24 09:50
Date Received: 07/03/24 08:10

Lab Sample ID: 885-7337-12
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			7870	AT	EET ALB	07/03/24 10:43
Total/NA	Analysis	8015M/D		1	7988	JP	EET ALB	07/06/24 09:49
Total/NA	Prep	5030C			7870	AT	EET ALB	07/03/24 10:43
Total/NA	Analysis	8021B		1	7946	JP	EET ALB	07/06/24 09:49
Total/NA	Prep	SHAKE			7885	KR	EET ALB	07/03/24 15:14
Total/NA	Analysis	8015M/D		1	7876	PD	EET ALB	07/04/24 02:14
Total/NA	Prep	300_Prep			7952	JT	EET ALB	07/05/24 15:35
Total/NA	Analysis	300.0		20	8024	JT	EET ALB	07/05/24 22:37

Client Sample ID: BH24-21 0FT
Date Collected: 07/01/24 10:00
Date Received: 07/03/24 08:10

Lab Sample ID: 885-7337-13
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			7870	AT	EET ALB	07/03/24 10:43
Total/NA	Analysis	8015M/D		1	7988	JP	EET ALB	07/06/24 10:12
Total/NA	Prep	5030C			7870	AT	EET ALB	07/03/24 10:43
Total/NA	Analysis	8021B		1	7946	JP	EET ALB	07/06/24 10:12
Total/NA	Prep	SHAKE			7885	KR	EET ALB	07/03/24 15:14
Total/NA	Analysis	8015M/D		1	7876	PD	EET ALB	07/04/24 02:25
Total/NA	Prep	300_Prep			7952	JT	EET ALB	07/05/24 15:35
Total/NA	Analysis	300.0		20	8024	JT	EET ALB	07/05/24 22:49

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Lab Chronicle

Client: Vertex
Project/Site: Endurance Lariat Water Line

Job ID: 885-7337-1

Client Sample ID: BH24-21 2FT

Lab Sample ID: 885-7337-14

Date Collected: 07/01/24 10:10

Matrix: Solid

Date Received: 07/03/24 08:10

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			7870	AT	EET ALB	07/03/24 10:43
Total/NA	Analysis	8015M/D		1	7988	JP	EET ALB	07/06/24 10:36
Total/NA	Prep	5030C			7870	AT	EET ALB	07/03/24 10:43
Total/NA	Analysis	8021B		1	7946	JP	EET ALB	07/06/24 10:36
Total/NA	Prep	SHAKE			7885	KR	EET ALB	07/03/24 15:14
Total/NA	Analysis	8015M/D		1	7876	PD	EET ALB	07/04/24 02:37
Total/NA	Prep	300_Prep			7952	JT	EET ALB	07/05/24 15:35
Total/NA	Analysis	300.0		20	8024	JT	EET ALB	07/05/24 23:01

Client Sample ID: BH24-21 4FT

Lab Sample ID: 885-7337-15

Date Collected: 07/01/24 10:20

Matrix: Solid

Date Received: 07/03/24 08:10

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			7886	AT	EET ALB	07/03/24 15:36
Total/NA	Analysis	8015M/D		1	8101	RA	EET ALB	07/08/24 21:43
Total/NA	Prep	5030C			7886	AT	EET ALB	07/03/24 15:36
Total/NA	Analysis	8021B		1	8102	RA	EET ALB	07/08/24 21:43
Total/NA	Prep	SHAKE			7934	KR	EET ALB	07/05/24 09:50
Total/NA	Analysis	8015M/D		1	7925	KR	EET ALB	07/05/24 15:21
Total/NA	Prep	300_Prep			8025	JT	EET ALB	07/08/24 12:29
Total/NA	Analysis	300.0		20	8052	JT	EET ALB	07/08/24 18:56

Client Sample ID: BH24-22 0FT

Lab Sample ID: 885-7337-16

Date Collected: 07/01/24 10:30

Matrix: Solid

Date Received: 07/03/24 08:10

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			7886	AT	EET ALB	07/03/24 15:36
Total/NA	Analysis	8015M/D		1	8101	RA	EET ALB	07/08/24 22:49
Total/NA	Prep	5030C			7886	AT	EET ALB	07/03/24 15:36
Total/NA	Analysis	8021B		1	8102	RA	EET ALB	07/08/24 22:49
Total/NA	Prep	SHAKE			7934	KR	EET ALB	07/05/24 09:50
Total/NA	Analysis	8015M/D		1	7925	KR	EET ALB	07/05/24 15:32
Total/NA	Prep	300_Prep			8025	JT	EET ALB	07/08/24 12:29
Total/NA	Analysis	300.0		20	8052	JT	EET ALB	07/08/24 19:09

Client Sample ID: BH24-22 2FT

Lab Sample ID: 885-7337-17

Date Collected: 07/01/24 10:40

Matrix: Solid

Date Received: 07/03/24 08:10

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			7886	AT	EET ALB	07/03/24 15:36
Total/NA	Analysis	8015M/D		1	8101	RA	EET ALB	07/08/24 23:54

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Lab Chronicle

Client: Vertex
Project/Site: Endurance Lariat Water Line

Job ID: 885-7337-1

Client Sample ID: BH24-22 2FT

Lab Sample ID: 885-7337-17

Date Collected: 07/01/24 10:40

Matrix: Solid

Date Received: 07/03/24 08:10

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			7886	AT	EET ALB	07/03/24 15:36
Total/NA	Analysis	8021B		1	8102	RA	EET ALB	07/08/24 23:54
Total/NA	Prep	SHAKE			7934	KR	EET ALB	07/05/24 09:50
Total/NA	Analysis	8015M/D		1	7925	KR	EET ALB	07/05/24 15:43
Total/NA	Prep	300_Prep			8025	JT	EET ALB	07/08/24 12:29
Total/NA	Analysis	300.0		20	8052	JT	EET ALB	07/08/24 20:13

Client Sample ID: BH24-22 4FT

Lab Sample ID: 885-7337-18

Date Collected: 07/01/24 10:50

Matrix: Solid

Date Received: 07/03/24 08:10

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			7886	AT	EET ALB	07/03/24 15:36
Total/NA	Analysis	8015M/D		1	8101	RA	EET ALB	07/09/24 00:16
Total/NA	Prep	5030C			7886	AT	EET ALB	07/03/24 15:36
Total/NA	Analysis	8021B		1	8102	RA	EET ALB	07/09/24 00:16
Total/NA	Prep	SHAKE			7934	KR	EET ALB	07/05/24 09:50
Total/NA	Analysis	8015M/D		1	7925	KR	EET ALB	07/05/24 15:54
Total/NA	Prep	300_Prep			8025	JT	EET ALB	07/08/24 12:29
Total/NA	Analysis	300.0		20	8052	JT	EET ALB	07/08/24 20:52

Client Sample ID: BH24-23 0FT

Lab Sample ID: 885-7337-19

Date Collected: 07/01/24 11:00

Matrix: Solid

Date Received: 07/03/24 08:10

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			7886	AT	EET ALB	07/03/24 15:36
Total/NA	Analysis	8015M/D		1	8101	RA	EET ALB	07/09/24 00:37
Total/NA	Prep	5030C			7886	AT	EET ALB	07/03/24 15:36
Total/NA	Analysis	8021B		1	8102	RA	EET ALB	07/09/24 00:37
Total/NA	Prep	SHAKE			7934	KR	EET ALB	07/05/24 09:50
Total/NA	Analysis	8015M/D		1	7925	KR	EET ALB	07/05/24 16:05
Total/NA	Prep	300_Prep			8025	JT	EET ALB	07/08/24 12:29
Total/NA	Analysis	300.0		20	8052	JT	EET ALB	07/08/24 21:05

Client Sample ID: BH24-23 2FT

Lab Sample ID: 885-7337-20

Date Collected: 07/01/24 11:10

Matrix: Solid

Date Received: 07/03/24 08:10

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			7886	AT	EET ALB	07/03/24 15:36
Total/NA	Analysis	8015M/D		1	8101	RA	EET ALB	07/09/24 00:59
Total/NA	Prep	5030C			7886	AT	EET ALB	07/03/24 15:36
Total/NA	Analysis	8021B		1	8102	RA	EET ALB	07/09/24 00:59

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Lab Chronicle

Client: Vertex
Project/Site: Endurance Lariat Water Line

Job ID: 885-7337-1

Client Sample ID: BH24-23 2FT
Date Collected: 07/01/24 11:10
Date Received: 07/03/24 08:10

Lab Sample ID: 885-7337-20
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	SHAKE			7934	KR	EET ALB	07/05/24 09:50
Total/NA	Analysis	8015M/D		1	7925	KR	EET ALB	07/05/24 16:27
Total/NA	Prep	300_Prep			8025	JT	EET ALB	07/08/24 12:29
Total/NA	Analysis	300.0		20	8052	JT	EET ALB	07/08/24 21:18

Client Sample ID: BH24-23 4FT
Date Collected: 07/01/24 11:20
Date Received: 07/03/24 08:10

Lab Sample ID: 885-7337-21
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			7886	AT	EET ALB	07/03/24 15:36
Total/NA	Analysis	8015M/D		1	8101	RA	EET ALB	07/09/24 01:21
Total/NA	Prep	5030C			7886	AT	EET ALB	07/03/24 15:36
Total/NA	Analysis	8021B		1	8102	RA	EET ALB	07/09/24 01:21
Total/NA	Prep	SHAKE			7934	KR	EET ALB	07/05/24 09:50
Total/NA	Analysis	8015M/D		1	7925	KR	EET ALB	07/05/24 16:38
Total/NA	Prep	300_Prep			8025	JT	EET ALB	07/08/24 12:29
Total/NA	Analysis	300.0		20	8052	JT	EET ALB	07/08/24 21:30

Client Sample ID: BH24-24 0FT
Date Collected: 07/01/24 11:30
Date Received: 07/03/24 08:10

Lab Sample ID: 885-7337-22
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			7886	AT	EET ALB	07/03/24 15:36
Total/NA	Analysis	8015M/D		1	8101	RA	EET ALB	07/09/24 01:43
Total/NA	Prep	5030C			7886	AT	EET ALB	07/03/24 15:36
Total/NA	Analysis	8021B		1	8102	RA	EET ALB	07/09/24 01:43
Total/NA	Prep	SHAKE			7934	KR	EET ALB	07/05/24 09:50
Total/NA	Analysis	8015M/D		1	7925	KR	EET ALB	07/05/24 16:49
Total/NA	Prep	300_Prep			8025	JT	EET ALB	07/08/24 12:29
Total/NA	Analysis	300.0		20	8052	JT	EET ALB	07/08/24 21:43

Client Sample ID: BH24-24 2FT
Date Collected: 07/01/24 11:40
Date Received: 07/03/24 08:10

Lab Sample ID: 885-7337-23
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			7886	AT	EET ALB	07/03/24 15:36
Total/NA	Analysis	8015M/D		1	8101	RA	EET ALB	07/09/24 02:05
Total/NA	Prep	5030C			7886	AT	EET ALB	07/03/24 15:36
Total/NA	Analysis	8021B		1	8102	RA	EET ALB	07/09/24 02:05
Total/NA	Prep	SHAKE			7934	KR	EET ALB	07/05/24 09:50
Total/NA	Analysis	8015M/D		1	7925	KR	EET ALB	07/05/24 16:59

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Lab Chronicle

Client: Vertex
Project/Site: Endurance Lariat Water Line

Job ID: 885-7337-1

Client Sample ID: BH24-24 2FT
Date Collected: 07/01/24 11:40
Date Received: 07/03/24 08:10

Lab Sample ID: 885-7337-23
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	300_Prep			8025	JT	EET ALB	07/08/24 12:29
Total/NA	Analysis	300.0		20	8052	JT	EET ALB	07/08/24 22:22

Client Sample ID: BH24-24 4FT
Date Collected: 07/01/24 11:50
Date Received: 07/03/24 08:10

Lab Sample ID: 885-7337-24
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			7886	AT	EET ALB	07/03/24 15:36
Total/NA	Analysis	8015M/D		1	8101	RA	EET ALB	07/09/24 02:27
Total/NA	Prep	5030C			7886	AT	EET ALB	07/03/24 15:36
Total/NA	Analysis	8021B		1	8102	RA	EET ALB	07/09/24 02:27
Total/NA	Prep	SHAKE			7934	KR	EET ALB	07/05/24 09:50
Total/NA	Analysis	8015M/D		1	7925	KR	EET ALB	07/05/24 17:10
Total/NA	Prep	300_Prep			8025	JT	EET ALB	07/08/24 12:29
Total/NA	Analysis	300.0		20	8052	JT	EET ALB	07/08/24 22:35

Client Sample ID: BH24-25 0FT
Date Collected: 07/01/24 12:00
Date Received: 07/03/24 08:10

Lab Sample ID: 885-7337-25
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			7886	AT	EET ALB	07/03/24 15:51
Total/NA	Analysis	8015M/D		1	8101	RA	EET ALB	07/09/24 03:10
Total/NA	Prep	5030C			7886	AT	EET ALB	07/03/24 15:51
Total/NA	Analysis	8021B		1	8102	RA	EET ALB	07/09/24 03:10
Total/NA	Prep	SHAKE			7934	KR	EET ALB	07/05/24 09:50
Total/NA	Analysis	8015M/D		1	7925	KR	EET ALB	07/05/24 17:21
Total/NA	Prep	300_Prep			8025	JT	EET ALB	07/08/24 12:29
Total/NA	Analysis	300.0		20	8052	JT	EET ALB	07/08/24 22:48

Client Sample ID: BH24-25 2FT
Date Collected: 07/01/24 12:10
Date Received: 07/03/24 08:10

Lab Sample ID: 885-7337-26
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			7886	AT	EET ALB	07/03/24 15:51
Total/NA	Analysis	8015M/D		1	8101	RA	EET ALB	07/09/24 03:32
Total/NA	Prep	5030C			7886	AT	EET ALB	07/03/24 15:51
Total/NA	Analysis	8021B		1	8102	RA	EET ALB	07/09/24 03:32
Total/NA	Prep	SHAKE			7934	KR	EET ALB	07/05/24 09:50
Total/NA	Analysis	8015M/D		1	7925	KR	EET ALB	07/05/24 17:32
Total/NA	Prep	300_Prep			8025	JT	EET ALB	07/08/24 12:29
Total/NA	Analysis	300.0		20	8052	JT	EET ALB	07/08/24 23:00

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Lab Chronicle

Client: Vertex
Project/Site: Endurance Lariat Water Line

Job ID: 885-7337-1

Client Sample ID: BH24-25 4FT
Date Collected: 07/01/24 12:20
Date Received: 07/03/24 08:10

Lab Sample ID: 885-7337-27
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			7886	AT	EET ALB	07/03/24 15:51
Total/NA	Analysis	8015M/D		1	8101	RA	EET ALB	07/09/24 03:54
Total/NA	Prep	5030C			7886	AT	EET ALB	07/03/24 15:51
Total/NA	Analysis	8021B		1	8102	RA	EET ALB	07/09/24 03:54
Total/NA	Prep	SHAKE			7934	KR	EET ALB	07/05/24 09:50
Total/NA	Analysis	8015M/D		1	7925	KR	EET ALB	07/05/24 17:43
Total/NA	Prep	300_Prep			8025	JT	EET ALB	07/08/24 12:29
Total/NA	Analysis	300.0		20	8052	JT	EET ALB	07/08/24 23:13

Laboratory References:
EET ALB = Eurofins Albuquerque, 4901 Hawkins NE, Albuquerque, NM 87109, TEL (505)345-3975

Accreditation/Certification Summary

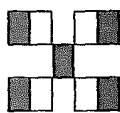
Client: Vertex
Project/Site: Endurance Lariat Water Line

Job ID: 885-7337-1

Laboratory: Eurofins Albuquerque

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
New Mexico	State	NM9425, NM0901	02-26-25
The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.			
Analysis Method	Prep Method	Matrix	Analyte
300.0	300_Prep	Solid	Chloride
8015M/D	5030C	Solid	Gasoline Range Organics [C6 - C10]
8015M/D	SHAKE	Solid	Diesel Range Organics [C10-C28]
8015M/D	SHAKE	Solid	Motor Oil Range Organics [C28-C40]
8021B	5030C	Solid	Benzene
8021B	5030C	Solid	Ethylbenzene
8021B	5030C	Solid	Toluene
8021B	5030C	Solid	Xylenes, Total
Oregon	NELAP	NM100001	02-26-25



HALL ENVIRONMENTAL ANALYSIS LAB

www.hallenvironmental.com

885-7337 COC

4901 Hawkins NE - Albuquerque, NM 87103

Tel 505-345-3975 Fax 505-345-4107

Analysis Request

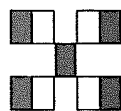
Client Vertex(Solaris Midstream Water Company)		Standard ☒ Rush <u>5 DAY</u>	
Mailing Address On File		Project Name Endurance Lariat Water Line	
Phone # On File		Project # 24E-03247	
email or Fax# Cdixon@vertex.ca		Project Manager Chance Dixon	
QA/QC Package		Sampler Wyatt Wadleigh	
☐ Standard ☐ Level 4 (Full Validation)		On Ice: ☒ Yes ☐ No	
Accreditation ☐ Az Compliance ☐ NELAC ☐ Other		# of Coolers: <u>1</u>	
☐ EDD (Type)		Cooler Temp (including CF): <u>0.9 ± 0 = 0.9°C</u>	

Date	Time	Matrix	Sample Name	Container Type and #	Preservative Type	HEAL No.	BTEX / MTBE / TMBs (8021)	TPH 8015D(GRO / DRO / MRO)	8081 Pesticides/8082 PCB's	EDB (Method 504 1)	PAHs by 8310 or 8270SIMS	RCRA 8 Metals	Cl, F, Br, NO ₃ , NO ₂ , PO ₄ , SO ₄	8260 (VOA)	8270 (Semi-VOA)	Total Coliform (Present/Absent)
07/01/24	8 00	Soil	BH24-26 0ft	1, 4oz jar		1	X	X					X			
07/01/24	8 10	Soil	BH24-26 2ft	1, 4oz jar		2	X	X					X			
07/01/24	8 20	Soil	BH24-26 4ft	1, 4oz jar		3	X	X					X			
07/01/24	8 30	Soil	BH24-18 0ft	1, 4oz jar		4	X	X					X			
07/01/24	8 40	Soil	BH24-18 2ft	1, 4oz jar		5	X	X					X			
07/01/24	8 50	Soil	BH24-18 4ft	1, 4oz jar		6	X	X					X			
07/01/24	9 00	Soil	BH24-19 0ft	1, 4oz jar		7	X	X					X			
07/01/24	9 10	Soil	BH24-19 2ft	1, 4oz jar		8	X	X					X			
07/01/24	9 20	Soil	BH24-19 4ft	1, 4oz jar		9	X	X					X			
07/01/24	9 30	Soil	BH24-20 0ft	1, 4oz jar		10	X	X					X			
07/01/24	9 40	Soil	BH24-20 2ft	1, 4oz jar		11	X	X					X			
07/01/24	9 50	Soil	BH24-20 4ft	1, 4oz jar		12	X	X					X			

Remarks Please CC wwadleigh@vertex.ca

Date	Time	Relinquished by	Wyatt Wadleigh	Via	Date	Time
7/1/24	9:05	Relinquished by	Wyatt Wadleigh	SCM COURIER	7/1/24	9:10

If necessary samples submitted to Hall Environmental may be subcontracted to other accredited laboratories This serves as notice of this possibility Any sub-contracted data will be clearly notated on the analytical report



HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.co.uk

4901 Hawkins NE - Albuquerque, NM 87109

Tel 505-345-3975 Fax 505-345-4107

Analysis Request

Chain-of-Custody Record						
Client Vertex(Solaris Midstream Water Company)						
Mailing Address On File						
Phone # On File						
email or Fax# Cdixon@vertex.ca						
QA/QC Package						
☐ Standard ☐ Level 4 (Full Validation)						
Accreditation ☐ Az Compliance						
☐ NELAC ☐ Other						
☐ EDD (Type) _____						
Date	Time	Matrix	Sample Name	Container Type and #	Preservative Type	HEAL No.
07/01/24	12 00	Soil	BH24-25 0ft	1, 4oz jar		25
07/01/24	12 10	Soil	BH24-25 2ft	1, 4oz jar		26
07/01/24	12 20	Soil	BH24-25 4ft	1, 4oz jar		27
Date	Time	Relinquished by Wyatt Wadleigh		Via	Date	Time
7/2/24	9:25				Mmmmmmmmm	7/2/24 9:25
Date	Time	Relinquished by		Via	Date	Time
7/2/24	19:00	Mmmmmmmmm			S.M CAUZEIR	7/3/24 08:10

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.

Login Sample Receipt Checklist

Client: Vertex

Job Number: 885-7337-1

Login Number: 7337

List Source: Eurofins Albuquerque

List Number: 1

Creator: McQuiston, Steven

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
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.	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").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	



Environment Testing

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ANALYTICAL REPORT

PREPARED FOR

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

Generated 7/19/2024 2:08:45 PM

JOB DESCRIPTION

Endurance Lariat Water Line

JOB NUMBER

885-7929-1

Eurofins Albuquerque
4901 Hawkins NE
Albuquerque NM 87109

Eurofins Albuquerque

Job Notes

The test results in this report relate only to the samples as received by the laboratory and will meet all requirements of the methodology, with any exceptions noted. This report shall not be reproduced except in full, without the express written approval of the laboratory. All questions should be directed to the Eurofins Environment Testing South Central, LLC Project Manager.

Authorization



Authorized for release by
Cheyenne Cason, Project Manager
cheyenne.cason@et.eurofinsus.com
(505)345-3975

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7/19/2024 2:08:45 PM

Client: Vertex
Project/Site: Endurance Lariat Water Line

Laboratory Job ID: 885-7929-1

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Definitions/Glossary

Client: Vertex
Project/Site: Endurance Lariat Water Line

Job ID: 885-7929-1

Qualifiers

GC VOA

Qualifier	Qualifier Description
S1+	Surrogate recovery exceeds control limits, high biased.

GC Semi VOA

Qualifier	Qualifier Description
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.
D	Surrogate or matrix spike recoveries were not obtained because the extract was diluted for analysis; also compounds analyzed at a dilution may be flagged with a D.
F2	MS/MSD RPD exceeds control limits
S1-	Surrogate recovery exceeds control limits, low biased.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	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: Endurance Lariat Water Line

Job ID: 885-7929-1

Job ID: 885-7929-1

Eurofins Albuquerque

Job Narrative 885-7929-1

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 and/or narrative comments are included to explain any exceptions, if applicable.

- Matrix QC may not be reported if insufficient sample is provided 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 7/13/2024 7:10 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 0.2°C.

Gasoline Range Organics

Method 8015D_GRO: Surrogate recovery for the following sample was outside control limits: TP24-01 4ft (885-7929-1). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8015D_GRO: Surrogate recovery for the following sample was outside control limits: TP24-02 0 (885-7929-3). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8015D_GRO: Surrogate recovery for the following sample was outside control limits: TP24-02 6ft (885-7929-4). 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 VOA

Method 8021B: Surrogate recovery for the following sample was outside control limits: TP24-02 6ft (885-7929-4). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8021B: Surrogate recovery for the following sample was outside control limits: TP24-02 6ft (885-7929-4). 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.

Diesel Range Organics

Method 8015D_DRO: The matrix spike / matrix spike duplicate / sample duplicate (MS/MSD/DUP) precision for preparation batch 885-8496 and analytical batch 885-8554 was outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample / laboratory control sample duplicate (LCS/LCSD) precision was within acceptance limits.

Method 8015D_DRO: The following sample required a dilution due to the nature of the sample matrix: TP24-02 6ft (885-7929-4). Because of this dilution, the surrogate spike concentration in the sample was reduced to a level where the recovery calculation does not provide useful information.

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.

Eurofins Albuquerque

Client Sample Results

Client: Vertex

Job ID: 885-7929-1

Project/Site: Endurance Lariat Water Line

Client Sample ID: TP24-01 4ft

Lab Sample ID: 885-7929-1

Date Collected: 07/11/24 10:30

Matrix: Solid

Date Received: 07/13/24 07:10

Method: SW846 8015M/D - Gasoline Range Organics (GRO) (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics [C6 - C10]	26		4.8	mg/Kg		07/15/24 12:01	07/16/24 18:02	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	385	S1+	35 - 166			07/15/24 12:01	07/16/24 18:02	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.024	mg/Kg		07/15/24 12:01	07/16/24 18:02	1
Ethylbenzene	ND		0.048	mg/Kg		07/15/24 12:01	07/16/24 18:02	1
Toluene	ND		0.048	mg/Kg		07/15/24 12:01	07/16/24 18:02	1
Xylenes, Total	0.37		0.096	mg/Kg		07/15/24 12:01	07/16/24 18:02	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	103		48 - 145			07/15/24 12:01	07/16/24 18:02	1

Method: SW846 8015M/D - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	1000	F2	42	mg/Kg		07/16/24 11:56	07/17/24 08:42	5
Motor Oil Range Organics [C28-C40]	340		210	mg/Kg		07/16/24 11:56	07/17/24 08:42	5
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
Di-n-octyl phthalate (Surr)	104		62 - 134			07/16/24 11:56	07/17/24 08:42	5

Method: EPA 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	310		59	mg/Kg		07/16/24 17:14	07/17/24 00:40	20

Eurofins Albuquerque

Client Sample Results

Client: Vertex

Job ID: 885-7929-1

Project/Site: Endurance Lariat Water Line

Client Sample ID: TP24-01 6ft

Lab Sample ID: 885-7929-2

Date Collected: 07/11/24 11:00

Matrix: Solid

Date Received: 07/13/24 07:10

Method: SW846 8015M/D - Gasoline Range Organics (GRO) (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics [C6 - C10]	ND		5.0	mg/Kg		07/15/24 12:01	07/16/24 18:26	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	122		35 - 166			07/15/24 12:01	07/16/24 18:26	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.025	mg/Kg		07/15/24 12:01	07/16/24 18:26	1
Ethylbenzene	ND		0.050	mg/Kg		07/15/24 12:01	07/16/24 18:26	1
Toluene	ND		0.050	mg/Kg		07/15/24 12:01	07/16/24 18:26	1
Xylenes, Total	ND		0.10	mg/Kg		07/15/24 12:01	07/16/24 18:26	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	97		48 - 145			07/15/24 12:01	07/16/24 18:26	1

Method: SW846 8015M/D - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	170		9.7	mg/Kg		07/17/24 08:26	07/17/24 19:47	1
Motor Oil Range Organics [C28-C40]	85		48	mg/Kg		07/17/24 08:26	07/17/24 19:47	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
Di-n-octyl phthalate (Surr)	102		62 - 134			07/17/24 08:26	07/17/24 19:47	1

Method: EPA 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	240		60	mg/Kg		07/16/24 17:14	07/17/24 00:55	20

Eurofins Albuquerque

Client Sample Results

Client: Vertex

Project/Site: Endurance Lariat Water Line

Job ID: 885-7929-1

Client Sample ID: TP24-02 0

Lab Sample ID: 885-7929-3

Date Collected: 07/11/24 11:45

Matrix: Solid

Date Received: 07/13/24 07:10

Method: SW846 8015M/D - Gasoline Range Organics (GRO) (GC)									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Gasoline Range Organics [C6 - C10]	60		4.9	mg/Kg		07/15/24 12:01	07/16/24 18:49	1	
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac	
4-Bromofluorobenzene (Surr)	480	S1+	35 - 166			07/15/24 12:01	07/16/24 18:49	1	

Method: SW846 8021B - Volatile Organic Compounds (GC)									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Benzene	ND		0.025	mg/Kg		07/15/24 12:01	07/16/24 18:49	1	
Ethylbenzene	0.29		0.049	mg/Kg		07/15/24 12:01	07/16/24 18:49	1	
Toluene	0.11		0.049	mg/Kg		07/15/24 12:01	07/16/24 18:49	1	
Xylenes, Total	3.4		0.098	mg/Kg		07/15/24 12:01	07/16/24 18:49	1	
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac	
4-Bromofluorobenzene (Surr)	126		48 - 145			07/15/24 12:01	07/16/24 18:49	1	

Method: SW846 8015M/D - Diesel Range Organics (DRO) (GC)									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Diesel Range Organics [C10-C28]	6300		190	mg/Kg		07/17/24 08:26	07/17/24 20:00	20	
Motor Oil Range Organics [C28-C40]	3100		960	mg/Kg		07/17/24 08:26	07/17/24 20:00	20	
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac	
Di-n-octyl phthalate (Surr)	0	S1- D	62 - 134			07/17/24 08:26	07/17/24 20:00	20	

Method: EPA 300.0 - Anions, Ion Chromatography									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Chloride	2100		60	mg/Kg		07/16/24 17:14	07/17/24 01:11	20	

Client Sample Results

Client: Vertex
Project/Site: Endurance Lariat Water Line

Job ID: 885-7929-1

Client Sample ID: TP24-02 6ft Lab Sample ID: 885-7929-4
Date Collected: 07/11/24 12:30 Matrix: Solid
Date Received: 07/13/24 07:10

Method: SW846 8015M/D - Gasoline Range Organics (GRO) (GC)									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Gasoline Range Organics [C6 - C10]	530		24	mg/Kg		07/15/24 12:01	07/17/24 17:15	5	
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac	
4-Bromofluorobenzene (Surr)	415	S1+	35 - 166			07/15/24 12:01	07/17/24 17:15	5	
Method: SW846 8021B - Volatile Organic Compounds (GC)									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Benzene	0.027		0.024	mg/Kg		07/15/24 12:01	07/16/24 19:13	1	
Ethylbenzene	1.1		0.047	mg/Kg		07/15/24 12:01	07/16/24 19:13	1	
Toluene	0.054		0.047	mg/Kg		07/15/24 12:01	07/16/24 19:13	1	
Xylenes, Total	15		0.47	mg/Kg		07/15/24 12:01	07/17/24 17:15	5	
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac	
4-Bromofluorobenzene (Surr)	334	S1+	48 - 145			07/15/24 12:01	07/16/24 19:13	1	
Method: SW846 8015M/D - Diesel Range Organics (DRO) (GC)									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Diesel Range Organics [C10-C28]	4300		94	mg/Kg		07/17/24 08:26	07/17/24 20:13	10	
Motor Oil Range Organics [C28-C40]	1400		470	mg/Kg		07/17/24 08:26	07/17/24 20:13	10	
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac	
Di-n-octyl phthalate (Surr)	0	S1- D	62 - 134			07/17/24 08:26	07/17/24 20:13	10	
Method: EPA 300.0 - Anions, Ion Chromatography									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Chloride	2600		150	mg/Kg		07/16/24 17:14	07/17/24 21:55	50	

Client Sample Results

Client: Vertex

Project/Site: Endurance Lariat Water Line

Job ID: 885-7929-1

Client Sample ID: TP24-02 12ft

Lab Sample ID: 885-7929-5

Date Collected: 07/11/24 14:00

Matrix: Solid

Date Received: 07/13/24 07:10

Method: SW846 8015M/D - Gasoline Range Organics (GRO) (GC)									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Gasoline Range Organics [C6 - C10]	5.4		4.7	mg/Kg		07/15/24 14:49	07/18/24 15:04	1	
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac	
4-Bromofluorobenzene (Surr)	166		35 - 166			07/15/24 14:49	07/18/24 15:04	1	
Method: SW846 8021B - Volatile Organic Compounds (GC)									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Benzene	ND		0.024	mg/Kg		07/15/24 14:49	07/17/24 13:16	1	
Ethylbenzene	ND		0.047	mg/Kg		07/15/24 14:49	07/17/24 13:16	1	
Toluene	ND		0.047	mg/Kg		07/15/24 14:49	07/17/24 13:16	1	
Xylenes, Total	0.14		0.094	mg/Kg		07/15/24 14:49	07/17/24 13:16	1	
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac	
4-Bromofluorobenzene (Surr)	105		48 - 145			07/15/24 14:49	07/17/24 13:16	1	
Method: SW846 8015M/D - Diesel Range Organics (DRO) (GC)									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Diesel Range Organics [C10-C28]	450		9.9	mg/Kg		07/17/24 08:26	07/17/24 20:25	1	
Motor Oil Range Organics [C28-C40]	210		49	mg/Kg		07/17/24 08:26	07/17/24 20:25	1	
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac	
Di-n-octyl phthalate (Surr)	105		62 - 134			07/17/24 08:26	07/17/24 20:25	1	
Method: EPA 300.0 - Anions, Ion Chromatography									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Chloride	350		60	mg/Kg		07/16/24 17:14	07/17/24 01:41	20	

Client Sample Results

Client: Vertex
Project/Site: Endurance Lariat Water Line

Job ID: 885-7929-1

Client Sample ID: TP24-03 6ft

Lab Sample ID: 885-7929-6

Date Collected: 07/11/24 14:30

Matrix: Solid

Date Received: 07/13/24 07:10

Method: SW846 8015M/D - Gasoline Range Organics (GRO) (GC)									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Gasoline Range Organics [C6 - C10]	390		24	mg/Kg		07/15/24 14:49	07/18/24 15:26	5	
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac	
4-Bromofluorobenzene (Surr)	322	S1+	35 - 166			07/15/24 14:49	07/18/24 15:26	5	
Method: SW846 8021B - Volatile Organic Compounds (GC)									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Benzene	ND		0.12	mg/Kg		07/15/24 14:49	07/17/24 13:38	5	
Ethylbenzene	3.9		0.24	mg/Kg		07/15/24 14:49	07/17/24 13:38	5	
Toluene	2.1		0.24	mg/Kg		07/15/24 14:49	07/17/24 13:38	5	
Xylenes, Total	17		0.48	mg/Kg		07/15/24 14:49	07/17/24 13:38	5	
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac	
4-Bromofluorobenzene (Surr)	214	S1+	48 - 145			07/15/24 14:49	07/17/24 13:38	5	
Method: SW846 8015M/D - Diesel Range Organics (DRO) (GC)									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Diesel Range Organics [C10-C28]	3300		94	mg/Kg		07/17/24 08:26	07/17/24 20:38	10	
Motor Oil Range Organics [C28-C40]	1300		470	mg/Kg		07/17/24 08:26	07/17/24 20:38	10	
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac	
Di-n-octyl phthalate (Surr)	0	S1- D	62 - 134			07/17/24 08:26	07/17/24 20:38	10	
Method: EPA 300.0 - Anions, Ion Chromatography									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Chloride	74		60	mg/Kg		07/16/24 17:14	07/17/24 01:56	20	

Client Sample Results

Client: Vertex

Job ID: 885-7929-1

Project/Site: Endurance Lariat Water Line

Client Sample ID: TP24-03 9ft

Lab Sample ID: 885-7929-7

Date Collected: 07/11/24 15:30

Matrix: Solid

Date Received: 07/13/24 07:10

Method: SW846 8015M/D - Gasoline Range Organics (GRO) (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics [C6 - C10]	6.2		5.0	mg/Kg		07/15/24 14:49	07/18/24 15:48	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	158		35 - 166			07/15/24 14:49	07/18/24 15:48	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.025	mg/Kg		07/15/24 14:49	07/17/24 14:00	1
Ethylbenzene	ND		0.050	mg/Kg		07/15/24 14:49	07/17/24 14:00	1
Toluene	ND		0.050	mg/Kg		07/15/24 14:49	07/17/24 14:00	1
Xylenes, Total	0.15		0.10	mg/Kg		07/15/24 14:49	07/17/24 14:00	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	104		48 - 145			07/15/24 14:49	07/17/24 14:00	1

Method: SW846 8015M/D - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	450		9.6	mg/Kg		07/17/24 08:26	07/17/24 20:51	1
Motor Oil Range Organics [C28-C40]	210		48	mg/Kg		07/17/24 08:26	07/17/24 20:51	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
Di-n-octyl phthalate (Surr)	103		62 - 134			07/17/24 08:26	07/17/24 20:51	1

Method: EPA 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		60	mg/Kg		07/17/24 09:06	07/17/24 11:13	20

Eurofins Albuquerque

QC Sample Results

Client: Vertex

Project/Site: Endurance Lariat Water Line

Job ID: 885-7929-1

Method: 8015M/D - Gasoline Range Organics (GRO) (GC)

Lab Sample ID: MB 885-8429/1-A						Client Sample ID: Method Blank			
Matrix: Solid						Prep Type: Total/NA			
Analysis Batch: 8508						Prep Batch: 8429			
Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Gasoline Range Organics [C6 - C10]	ND		5.0	mg/Kg		07/15/24 12:01	07/16/24 11:41	1	
Surrogate	MB %Recovery	MB Qualifier	Limits			Prepared	Analyzed	Dil Fac	
4-Bromofluorobenzene (Surr)	97		35 - 166			07/15/24 12:01	07/16/24 11:41	1	

Lab Sample ID: LCS 885-8429/2-A						Client Sample ID: Lab Control Sample			
Matrix: Solid						Prep Type: Total/NA			
Analysis Batch: 8508						Prep Batch: 8429			
Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics [C6 - C10]			25.0	23.9		mg/Kg		95	70 - 130
Surrogate	LCS %Recovery	LCS Qualifier	Limits						
4-Bromofluorobenzene (Surr)	201	S1+	35 - 166						

Lab Sample ID: MB 885-8444/1-A						Client Sample ID: Method Blank			
Matrix: Solid						Prep Type: Total/NA			
Analysis Batch: 8543						Prep Batch: 8444			
Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Gasoline Range Organics [C6 - C10]	ND		5.0	mg/Kg		07/15/24 14:49	07/16/24 12:15	1	
Surrogate	MB %Recovery	MB Qualifier	Limits			Prepared	Analyzed	Dil Fac	
4-Bromofluorobenzene (Surr)	92		35 - 166			07/15/24 14:49	07/16/24 12:15	1	

Lab Sample ID: LCS 885-8444/2-A						Client Sample ID: Lab Control Sample			
Matrix: Solid						Prep Type: Total/NA			
Analysis Batch: 8543						Prep Batch: 8444			
Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics [C6 - C10]			25.0	21.9		mg/Kg		87	70 - 130
Surrogate	LCS %Recovery	LCS Qualifier	Limits						
4-Bromofluorobenzene (Surr)	200	S1+	35 - 166						

Lab Sample ID: MB 885-8481/1-A						Client Sample ID: Method Blank			
Matrix: Solid						Prep Type: Total/NA			
Analysis Batch: 8768						Prep Batch: 8481			
Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Gasoline Range Organics [C6 - C10]	ND		5.0	mg/Kg		07/16/24 10:33	07/18/24 14:42	1	
Surrogate	MB %Recovery	MB Qualifier	Limits			Prepared	Analyzed	Dil Fac	
4-Bromofluorobenzene (Surr)	102		35 - 166			07/16/24 10:33	07/18/24 14:42	1	

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QC Sample Results

Client: Vertex
Project/Site: Endurance Lariat Water Line

Job ID: 885-7929-1

Method: 8015M/D - Gasoline Range Organics (GRO) (GC) (Continued)

Lab Sample ID: LCS 885-8481/2-A				Client Sample ID: Lab Control Sample					
Matrix: Solid				Prep Type: Total/NA					
Analysis Batch: 8768				Prep Batch: 8481					
Analyte		Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits	
Gasoline Range Organics [C6 - C10]		25.0	22.3		mg/Kg		89	70 - 130	
Surrogate	LCS %Recovery	LCS Qualifier	Limits						
4-Bromofluorobenzene (Surr)	206	S1+	35 - 166						

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 885-8429/1-A				Client Sample ID: Method Blank					
Matrix: Solid				Prep Type: Total/NA					
Analysis Batch: 8565				Prep Batch: 8429					
Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Benzene	ND		0.025	mg/Kg		07/15/24 12:01	07/16/24 11:41		1
Ethylbenzene	ND		0.050	mg/Kg		07/15/24 12:01	07/16/24 11:41		1
Toluene	ND		0.050	mg/Kg		07/15/24 12:01	07/16/24 11:41		1
Xylenes, Total	ND		0.10	mg/Kg		07/15/24 12:01	07/16/24 11:41		1
Surrogate	MB %Recovery	MB Qualifier	Limits			Prepared	Analyzed	Dil Fac	
4-Bromofluorobenzene (Surr)	90		48 - 145			07/15/24 12:01	07/16/24 11:41		1

Lab Sample ID: LCS 885-8429/3-A				Client Sample ID: Lab Control Sample					
Matrix: Solid				Prep Type: Total/NA					
Analysis Batch: 8565				Prep Batch: 8429					
Analyte		Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits	
Benzene		1.00	0.906		mg/Kg		91	70 - 130	
Ethylbenzene		1.00	0.861		mg/Kg		86	70 - 130	
m,p-Xylene		2.00	1.77		mg/Kg		88	70 - 130	
o-Xylene		1.00	0.859		mg/Kg		86	70 - 130	
Toluene		1.00	0.857		mg/Kg		86	70 - 130	
Surrogate	LCS %Recovery	LCS Qualifier	Limits						
4-Bromofluorobenzene (Surr)	94		48 - 145						

Lab Sample ID: MB 885-8444/1-A				Client Sample ID: Method Blank					
Matrix: Solid				Prep Type: Total/NA					
Analysis Batch: 8544				Prep Batch: 8444					
Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Benzene	ND		0.025	mg/Kg		07/15/24 14:49	07/16/24 12:15		1
Ethylbenzene	ND		0.050	mg/Kg		07/15/24 14:49	07/16/24 12:15		1
Toluene	ND		0.050	mg/Kg		07/15/24 14:49	07/16/24 12:15		1
Xylenes, Total	ND		0.10	mg/Kg		07/15/24 14:49	07/16/24 12:15		1
Surrogate	MB %Recovery	MB Qualifier	Limits			Prepared	Analyzed	Dil Fac	
4-Bromofluorobenzene (Surr)	91		48 - 145			07/15/24 14:49	07/16/24 12:15		1

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QC Sample Results

Client: Vertex

Job ID: 885-7929-1

Project/Site: Endurance Lariat Water Line

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

Lab Sample ID: LCS 885-8444/3-A

Matrix: Solid

Analysis Batch: 8544

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 8444

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	1.00	0.855		mg/Kg		85	70 - 130
Ethylbenzene	1.00	0.870		mg/Kg		87	70 - 130
m,p-Xylene	2.00	1.73		mg/Kg		87	70 - 130
o-Xylene	1.00	0.859		mg/Kg		86	70 - 130
Toluene	1.00	0.856		mg/Kg		86	70 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene (Surr)	93		48 - 145

Lab Sample ID: MB 885-8481/1-A

Matrix: Solid

Analysis Batch: 8677

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 8481

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.025	mg/Kg		07/16/24 10:33	07/17/24 12:32	1
Ethylbenzene	ND		0.050	mg/Kg		07/16/24 10:33	07/17/24 12:32	1
Toluene	ND		0.050	mg/Kg		07/16/24 10:33	07/17/24 12:32	1
Xylenes, Total	ND		0.10	mg/Kg		07/16/24 10:33	07/17/24 12:32	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	93		48 - 145	07/16/24 10:33	07/17/24 12:32	1

Lab Sample ID: LCS 885-8481/3-A

Matrix: Solid

Analysis Batch: 8677

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 8481

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	1.00	0.876		mg/Kg		88	70 - 130
Ethylbenzene	1.00	0.890		mg/Kg		89	70 - 130
m,p-Xylene	2.00	1.77		mg/Kg		89	70 - 130
o-Xylene	1.00	0.894		mg/Kg		89	70 - 130
Toluene	1.00	0.872		mg/Kg		87	70 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene (Surr)	94		48 - 145

Method: 8015M/D - Diesel Range Organics (DRO) (GC)

Lab Sample ID: MB 885-8496/1-A

Matrix: Solid

Analysis Batch: 8518

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 8496

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		10	mg/Kg		07/16/24 11:56	07/17/24 02:45	1
Motor Oil Range Organics [C28-C40]	ND		50	mg/Kg		07/16/24 11:56	07/17/24 02:45	1

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QC Sample Results

Client: Vertex

Job ID: 885-7929-1

Project/Site: Endurance Lariat Water Line

Method: 8015M/D - Diesel Range Organics (DRO) (GC) (Continued)

Lab Sample ID: MB 885-8496/1-A

Matrix: Solid

Analysis Batch: 8518

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 8496

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Di-n-octyl phthalate (Surr)	112		62 - 134	07/16/24 11:56	07/17/24 02:45	1

Lab Sample ID: LCS 885-8496/2-A

Matrix: Solid

Analysis Batch: 8518

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 8496

Analyte			Spike	LCS	LCS	Unit	D	%Rec	%Rec	Limits		
			Added	Result	Qualifier							
Diesel Range Organics [C10-C28]			50.0	45.8		mg/Kg		92		60 - 135		
Surrogate	LCS		Limits	LCS								
	%Recovery	Qualifier										
Di-n-octyl phthalate (Surr)	100		62 - 134									

Lab Sample ID: 885-7929-1 MS

Matrix: Solid

Analysis Batch: 8554

Client Sample ID: TP24-01 4ft

Prep Type: Total/NA

Prep Batch: 8496

Analyte	Sample	Sample	Spike	MS	MS	Unit	D	%Rec	%Rec		
	Result	Qualifier	Added	Result	Qualifier				Limits		
Diesel Range Organics [C10-C28]	1000	F2	47.8	1530	4	mg/Kg		1094	44 - 136		
Surrogate	MS	MS	Limits								
	%Recovery	Qualifier									
Di-n-octyl phthalate (Surr)	109		62 - 134								

Lab Sample ID: 885-7929-1 MSD

Matrix: Solid

Analysis Batch: 8554

Client Sample ID: TP24-01 4ft

Prep Type: Total/NA

Prep Batch: 8496

Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	%Rec	%Rec	RPD	RPD
	Result	Qualifier	Added	Result	Qualifier				Limits		Limit
Diesel Range Organics [C10-C28]	1000	F2	47.8	705	4 F2	mg/Kg		-638	44 - 136	74	32
Surrogate	MSD %Recovery	MSD Qualifier	Limits								
Di-n-octyl phthalate (Surr)	105		62 - 134								

Lab Sample ID: MB 885-8542/1-A

Matrix: Solid

Analysis Batch: 8554

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 8542

Analyte	MB	MB	RL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier						
Diesel Range Organics [C10-C28]	ND		10	mg/Kg		07/17/24 08:26	07/17/24 19:08	1
Motor Oil Range Organics [C28-C40]	ND		50	mg/Kg		07/17/24 08:26	07/17/24 19:08	1
Surrogate	MB	MB	Limits			Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier						
Di-n-octyl phthalate (Surr)	104		62 - 134			07/17/24 08:26	07/17/24 19:08	1

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QC Sample Results

Client: Vertex

Job ID: 885-7929-1

Project/Site: Endurance Lariat Water Line

Method: 8015M/D - Diesel Range Organics (DRO) (GC) (Continued)

Lab Sample ID: LCS 885-8542/2-A

Matrix: Solid

Analysis Batch: 8554

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 8542

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Diesel Range Organics [C10-C28]	50.0	43.2		mg/Kg		86	60 - 135
Surrogate	LCS %Recovery	LCS Qualifier	Limits				
Di-n-octyl phthalate (Surr)	100		62 - 134				

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 885-8529/1-A

Matrix: Solid

Analysis Batch: 8550

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 8529

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		3.0	mg/Kg		07/16/24 17:14	07/16/24 18:36	1

Lab Sample ID: LCS 885-8529/2-A

Matrix: Solid

Analysis Batch: 8550

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 8529

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	30.0	29.5		mg/Kg		98	90 - 110

Lab Sample ID: MB 885-8548/1-A

Matrix: Solid

Analysis Batch: 8619

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 8548

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		1.5	mg/Kg		07/17/24 09:06	07/17/24 10:43	1

Lab Sample ID: LCS 885-8548/2-A

Matrix: Solid

Analysis Batch: 8619

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 8548

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	15.0	14.2		mg/Kg		95	90 - 110

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QC Association Summary

Client: Vertex
Project/Site: Endurance Lariat Water Line

Job ID: 885-7929-1

GC VOA

Prep Batch: 8429

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-7929-1	TP24-01 4ft	Total/NA	Solid	5030C	
885-7929-2	TP24-01 6ft	Total/NA	Solid	5030C	
885-7929-3	TP24-02 0	Total/NA	Solid	5030C	
885-7929-4	TP24-02 6ft	Total/NA	Solid	5030C	
MB 885-8429/1-A	Method Blank	Total/NA	Solid	5030C	
LCS 885-8429/2-A	Lab Control Sample	Total/NA	Solid	5030C	
LCS 885-8429/3-A	Lab Control Sample	Total/NA	Solid	5030C	

Prep Batch: 8444

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-7929-5	TP24-02 12ft	Total/NA	Solid	5030C	
885-7929-6	TP24-03 6ft	Total/NA	Solid	5030C	
885-7929-7	TP24-03 9ft	Total/NA	Solid	5030C	
MB 885-8444/1-A	Method Blank	Total/NA	Solid	5030C	
LCS 885-8444/2-A	Lab Control Sample	Total/NA	Solid	5030C	
LCS 885-8444/3-A	Lab Control Sample	Total/NA	Solid	5030C	

Prep Batch: 8481

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 885-8481/1-A	Method Blank	Total/NA	Solid	5030C	
LCS 885-8481/2-A	Lab Control Sample	Total/NA	Solid	5030C	
LCS 885-8481/3-A	Lab Control Sample	Total/NA	Solid	5030C	

Analysis Batch: 8508

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-7929-1	TP24-01 4ft	Total/NA	Solid	8015M/D	8429
885-7929-2	TP24-01 6ft	Total/NA	Solid	8015M/D	8429
885-7929-3	TP24-02 0	Total/NA	Solid	8015M/D	8429
MB 885-8429/1-A	Method Blank	Total/NA	Solid	8015M/D	8429
LCS 885-8429/2-A	Lab Control Sample	Total/NA	Solid	8015M/D	8429

Analysis Batch: 8543

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 885-8444/1-A	Method Blank	Total/NA	Solid	8015M/D	8444
LCS 885-8444/2-A	Lab Control Sample	Total/NA	Solid	8015M/D	8444

Analysis Batch: 8544

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 885-8444/1-A	Method Blank	Total/NA	Solid	8021B	8444
LCS 885-8444/3-A	Lab Control Sample	Total/NA	Solid	8021B	8444

Analysis Batch: 8565

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-7929-1	TP24-01 4ft	Total/NA	Solid	8021B	8429
885-7929-2	TP24-01 6ft	Total/NA	Solid	8021B	8429
885-7929-3	TP24-02 0	Total/NA	Solid	8021B	8429
885-7929-4	TP24-02 6ft	Total/NA	Solid	8021B	8429
MB 885-8429/1-A	Method Blank	Total/NA	Solid	8021B	8429
LCS 885-8429/3-A	Lab Control Sample	Total/NA	Solid	8021B	8429

Eurofins Albuquerque

QC Association Summary

Client: Vertex
Project/Site: Endurance Lariat Water Line

Job ID: 885-7929-1

GC VOA

Analysis Batch: 8636

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-7929-4	TP24-02 6ft	Total/NA	Solid	8015M/D	8429

Analysis Batch: 8638

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-7929-4	TP24-02 6ft	Total/NA	Solid	8021B	8429

Analysis Batch: 8677

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-7929-5	TP24-02 12ft	Total/NA	Solid	8021B	8444
885-7929-6	TP24-03 6ft	Total/NA	Solid	8021B	8444
885-7929-7	TP24-03 9ft	Total/NA	Solid	8021B	8444
MB 885-8481/1-A	Method Blank	Total/NA	Solid	8021B	8481
LCS 885-8481/3-A	Lab Control Sample	Total/NA	Solid	8021B	8481

Analysis Batch: 8768

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-7929-5	TP24-02 12ft	Total/NA	Solid	8015M/D	8444
885-7929-6	TP24-03 6ft	Total/NA	Solid	8015M/D	8444
885-7929-7	TP24-03 9ft	Total/NA	Solid	8015M/D	8444
MB 885-8481/1-A	Method Blank	Total/NA	Solid	8015M/D	8481
LCS 885-8481/2-A	Lab Control Sample	Total/NA	Solid	8015M/D	8481

GC Semi VOA

Prep Batch: 8496

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-7929-1	TP24-01 4ft	Total/NA	Solid	SHAKE	
MB 885-8496/1-A	Method Blank	Total/NA	Solid	SHAKE	
LCS 885-8496/2-A	Lab Control Sample	Total/NA	Solid	SHAKE	
885-7929-1 MS	TP24-01 4ft	Total/NA	Solid	SHAKE	
885-7929-1 MSD	TP24-01 4ft	Total/NA	Solid	SHAKE	

Analysis Batch: 8518

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 885-8496/1-A	Method Blank	Total/NA	Solid	8015M/D	8496
LCS 885-8496/2-A	Lab Control Sample	Total/NA	Solid	8015M/D	8496

Prep Batch: 8542

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-7929-2	TP24-01 6ft	Total/NA	Solid	SHAKE	
885-7929-3	TP24-02 0	Total/NA	Solid	SHAKE	
885-7929-4	TP24-02 6ft	Total/NA	Solid	SHAKE	
885-7929-5	TP24-02 12ft	Total/NA	Solid	SHAKE	
885-7929-6	TP24-03 6ft	Total/NA	Solid	SHAKE	
885-7929-7	TP24-03 9ft	Total/NA	Solid	SHAKE	
MB 885-8542/1-A	Method Blank	Total/NA	Solid	SHAKE	
LCS 885-8542/2-A	Lab Control Sample	Total/NA	Solid	SHAKE	

Analysis Batch: 8554

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-7929-1	TP24-01 4ft	Total/NA	Solid	8015M/D	8496

Eurofins Albuquerque

QC Association Summary

Client: Vertex
Project/Site: Endurance Lariat Water Line

Job ID: 885-7929-1

GC Semi VOA (Continued)

Analysis Batch: 8554 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-7929-2	TP24-01 6ft	Total/NA	Solid	8015M/D	8542
885-7929-3	TP24-02 0	Total/NA	Solid	8015M/D	8542
885-7929-4	TP24-02 6ft	Total/NA	Solid	8015M/D	8542
885-7929-5	TP24-02 12ft	Total/NA	Solid	8015M/D	8542
885-7929-6	TP24-03 6ft	Total/NA	Solid	8015M/D	8542
885-7929-7	TP24-03 9ft	Total/NA	Solid	8015M/D	8542
MB 885-8542/1-A	Method Blank	Total/NA	Solid	8015M/D	8542
LCS 885-8542/2-A	Lab Control Sample	Total/NA	Solid	8015M/D	8542
885-7929-1 MS	TP24-01 4ft	Total/NA	Solid	8015M/D	8496
885-7929-1 MSD	TP24-01 4ft	Total/NA	Solid	8015M/D	8496

HPLC/IC

Prep Batch: 8529

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-7929-1	TP24-01 4ft	Total/NA	Solid	300_Prep	
885-7929-2	TP24-01 6ft	Total/NA	Solid	300_Prep	
885-7929-3	TP24-02 0	Total/NA	Solid	300_Prep	
885-7929-4	TP24-02 6ft	Total/NA	Solid	300_Prep	
885-7929-5	TP24-02 12ft	Total/NA	Solid	300_Prep	
885-7929-6	TP24-03 6ft	Total/NA	Solid	300_Prep	
MB 885-8529/1-A	Method Blank	Total/NA	Solid	300_Prep	
LCS 885-8529/2-A	Lab Control Sample	Total/NA	Solid	300_Prep	

Prep Batch: 8548

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-7929-7	TP24-03 9ft	Total/NA	Solid	300_Prep	
MB 885-8548/1-A	Method Blank	Total/NA	Solid	300_Prep	
LCS 885-8548/2-A	Lab Control Sample	Total/NA	Solid	300_Prep	

Analysis Batch: 8550

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-7929-1	TP24-01 4ft	Total/NA	Solid	300.0	8529
885-7929-2	TP24-01 6ft	Total/NA	Solid	300.0	8529
885-7929-3	TP24-02 0	Total/NA	Solid	300.0	8529
885-7929-5	TP24-02 12ft	Total/NA	Solid	300.0	8529
885-7929-6	TP24-03 6ft	Total/NA	Solid	300.0	8529
MB 885-8529/1-A	Method Blank	Total/NA	Solid	300.0	8529
LCS 885-8529/2-A	Lab Control Sample	Total/NA	Solid	300.0	8529

Analysis Batch: 8619

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-7929-4	TP24-02 6ft	Total/NA	Solid	300.0	8529
885-7929-7	TP24-03 9ft	Total/NA	Solid	300.0	8548
MB 885-8548/1-A	Method Blank	Total/NA	Solid	300.0	8548
LCS 885-8548/2-A	Lab Control Sample	Total/NA	Solid	300.0	8548

Lab Chronicle

Client: Vertex
Project/Site: Endurance Lariat Water Line

Job ID: 885-7929-1

Client Sample ID: TP24-01 4ft
Date Collected: 07/11/24 10:30
Date Received: 07/13/24 07:10

Lab Sample ID: 885-7929-1
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			8429	JP	EET ALB	07/15/24 12:01
Total/NA	Analysis	8015M/D		1	8508	JP	EET ALB	07/16/24 18:02
Total/NA	Prep	5030C			8429	JP	EET ALB	07/15/24 12:01
Total/NA	Analysis	8021B		1	8565	JP	EET ALB	07/16/24 18:02
Total/NA	Prep	SHAKE			8496	KR	EET ALB	07/16/24 11:56
Total/NA	Analysis	8015M/D		5	8554	PD	EET ALB	07/17/24 08:42
Total/NA	Prep	300_Prep			8529	RC	EET ALB	07/16/24 17:14
Total/NA	Analysis	300.0		20	8550	JT	EET ALB	07/17/24 00:40

Client Sample ID: TP24-01 6ft
Date Collected: 07/11/24 11:00
Date Received: 07/13/24 07:10

Lab Sample ID: 885-7929-2
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			8429	JP	EET ALB	07/15/24 12:01
Total/NA	Analysis	8015M/D		1	8508	JP	EET ALB	07/16/24 18:26
Total/NA	Prep	5030C			8429	JP	EET ALB	07/15/24 12:01
Total/NA	Analysis	8021B		1	8565	JP	EET ALB	07/16/24 18:26
Total/NA	Prep	SHAKE			8542	KR	EET ALB	07/17/24 08:26
Total/NA	Analysis	8015M/D		1	8554	PD	EET ALB	07/17/24 19:47
Total/NA	Prep	300_Prep			8529	RC	EET ALB	07/16/24 17:14
Total/NA	Analysis	300.0		20	8550	JT	EET ALB	07/17/24 00:55

Client Sample ID: TP24-02 0
Date Collected: 07/11/24 11:45
Date Received: 07/13/24 07:10

Lab Sample ID: 885-7929-3
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			8429	JP	EET ALB	07/15/24 12:01
Total/NA	Analysis	8015M/D		1	8508	JP	EET ALB	07/16/24 18:49
Total/NA	Prep	5030C			8429	JP	EET ALB	07/15/24 12:01
Total/NA	Analysis	8021B		1	8565	JP	EET ALB	07/16/24 18:49
Total/NA	Prep	SHAKE			8542	KR	EET ALB	07/17/24 08:26
Total/NA	Analysis	8015M/D		20	8554	PD	EET ALB	07/17/24 20:00
Total/NA	Prep	300_Prep			8529	RC	EET ALB	07/16/24 17:14
Total/NA	Analysis	300.0		20	8550	JT	EET ALB	07/17/24 01:11

Client Sample ID: TP24-02 6ft
Date Collected: 07/11/24 12:30
Date Received: 07/13/24 07:10

Lab Sample ID: 885-7929-4
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			8429	JP	EET ALB	07/15/24 12:01
Total/NA	Analysis	8015M/D		5	8636	JP	EET ALB	07/17/24 17:15

Eurofins Albuquerque

Lab Chronicle

Client: Vertex
Project/Site: Endurance Lariat Water Line

Job ID: 885-7929-1

Client Sample ID: TP24-02 6ft

Lab Sample ID: 885-7929-4

Date Collected: 07/11/24 12:30

Matrix: Solid

Date Received: 07/13/24 07:10

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			8429	JP	EET ALB	07/15/24 12:01
Total/NA	Analysis	8021B		1	8565	JP	EET ALB	07/16/24 19:13
Total/NA	Prep	5030C			8429	JP	EET ALB	07/15/24 12:01
Total/NA	Analysis	8021B		5	8638	JP	EET ALB	07/17/24 17:15
Total/NA	Prep	SHAKE			8542	KR	EET ALB	07/17/24 08:26
Total/NA	Analysis	8015M/D		10	8554	PD	EET ALB	07/17/24 20:13
Total/NA	Prep	300_Prep			8529	RC	EET ALB	07/16/24 17:14
Total/NA	Analysis	300.0		50	8619	RC	EET ALB	07/17/24 21:55

Client Sample ID: TP24-02 12ft

Lab Sample ID: 885-7929-5

Date Collected: 07/11/24 14:00

Matrix: Solid

Date Received: 07/13/24 07:10

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			8444	AT	EET ALB	07/15/24 14:49
Total/NA	Analysis	8015M/D		1	8768	AT	EET ALB	07/18/24 15:04
Total/NA	Prep	5030C			8444	AT	EET ALB	07/15/24 14:49
Total/NA	Analysis	8021B		1	8677	AT	EET ALB	07/17/24 13:16
Total/NA	Prep	SHAKE			8542	KR	EET ALB	07/17/24 08:26
Total/NA	Analysis	8015M/D		1	8554	PD	EET ALB	07/17/24 20:25
Total/NA	Prep	300_Prep			8529	RC	EET ALB	07/16/24 17:14
Total/NA	Analysis	300.0		20	8550	JT	EET ALB	07/17/24 01:41

Client Sample ID: TP24-03 6ft

Lab Sample ID: 885-7929-6

Date Collected: 07/11/24 14:30

Matrix: Solid

Date Received: 07/13/24 07:10

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			8444	AT	EET ALB	07/15/24 14:49
Total/NA	Analysis	8015M/D		5	8768	AT	EET ALB	07/18/24 15:26
Total/NA	Prep	5030C			8444	AT	EET ALB	07/15/24 14:49
Total/NA	Analysis	8021B		5	8677	AT	EET ALB	07/17/24 13:38
Total/NA	Prep	SHAKE			8542	KR	EET ALB	07/17/24 08:26
Total/NA	Analysis	8015M/D		10	8554	PD	EET ALB	07/17/24 20:38
Total/NA	Prep	300_Prep			8529	RC	EET ALB	07/16/24 17:14
Total/NA	Analysis	300.0		20	8550	JT	EET ALB	07/17/24 01:56

Client Sample ID: TP24-03 9ft

Lab Sample ID: 885-7929-7

Date Collected: 07/11/24 15:30

Matrix: Solid

Date Received: 07/13/24 07:10

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			8444	AT	EET ALB	07/15/24 14:49
Total/NA	Analysis	8015M/D		1	8768	AT	EET ALB	07/18/24 15:48

Eurofins Albuquerque

Lab Chronicle

Client: Vertex
Project/Site: Endurance Lariat Water Line

Job ID: 885-7929-1

Client Sample ID: TP24-03 9ft

Date Collected: 07/11/24 15:30

Date Received: 07/13/24 07:10

Lab Sample ID: 885-7929-7

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			8444	AT	EET ALB	07/15/24 14:49
Total/NA	Analysis	8021B		1	8677	AT	EET ALB	07/17/24 14:00
Total/NA	Prep	SHAKE			8542	KR	EET ALB	07/17/24 08:26
Total/NA	Analysis	8015M/D		1	8554	PD	EET ALB	07/17/24 20:51
Total/NA	Prep	300_Prep			8548	RC	EET ALB	07/17/24 09:06
Total/NA	Analysis	300.0		20	8619	RC	EET ALB	07/17/24 11:13

Laboratory References:
EET ALB = Eurofins Albuquerque, 4901 Hawkins NE, Albuquerque, NM 87109, TEL (505)345-3975

Accreditation/Certification Summary

Client: Vertex
Project/Site: Endurance Lariat Water Line

Job ID: 885-7929-1

Laboratory: Eurofins Albuquerque

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
New Mexico	State	NM9425, NM0901	02-26-25
The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.			
Analysis Method	Prep Method	Matrix	Analyte
300.0	300_Prep	Solid	Chloride
8015M/D	5030C	Solid	Gasoline Range Organics [C6 - C10]
8015M/D	SHAKE	Solid	Diesel Range Organics [C10-C28]
8015M/D	SHAKE	Solid	Motor Oil Range Organics [C28-C40]
8021B	5030C	Solid	Benzene
8021B	5030C	Solid	Ethylbenzene
8021B	5030C	Solid	Toluene
8021B	5030C	Solid	Xylenes, Total
Oregon	NELAP	NM100001	02-26-25

Login Sample Receipt Checklist

Client: Vertex

Job Number: 885-7929-1

Login Number: 7929

List Source: Eurofins Albuquerque

List Number: 1

Creator: Rojas, Juan

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
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.	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").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	



Environment Testing

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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

Endurance Lariat Water Line

JOB NUMBER

885-8089-1

Eurofins Albuquerque
4901 Hawkins NE
Albuquerque NM 87109

Eurofins Albuquerque

Job Notes

The test results in this report relate only to the samples as received by the laboratory and will meet all requirements of the methodology, with any exceptions noted. This report shall not be reproduced except in full, without the express written approval of the laboratory. All questions should be directed to the Eurofins Environment Testing South Central, LLC Project Manager.

Authorization



Authorized for release by
Cheyenne Cason, Project Manager
cheyenne.cason@et.eurofinsus.com
(505)345-3975

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Client: Vertex
Project/Site: Endurance Lariat Water Line

Laboratory Job ID: 885-8089-1

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Definitions/Glossary

Client: Vertex
Project/Site: Endurance Lariat Water Line

Job ID: 885-8089-1

Qualifiers

GC VOA

Qualifier	Qualifier Description
S1+	Surrogate recovery exceeds control limits, high biased.

GC Semi VOA

Qualifier	Qualifier Description
D	Surrogate or matrix spike recoveries were not obtained because the extract was diluted for analysis; also compounds analyzed at a dilution may be flagged with a D.
S1-	Surrogate recovery exceeds control limits, low biased.
S1+	Surrogate recovery exceeds control limits, high biased.

HPLC/IC

Qualifier	Qualifier Description
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.

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: Endurance Lariat Water Line

Job ID: 885-8089-1

Job ID: 885-8089-1

Eurofins Albuquerque

Job Narrative 885-8089-1

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 and/or narrative comments are included to explain any exceptions, if applicable.

- Matrix QC may not be reported if insufficient sample is provided 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 7/17/2024 7:18 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.

Gasoline Range Organics

Method 8015D_GRO: Surrogate recovery for the following sample was outside control limits: TP24-08 12ft (885-8089-12). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8015D_GRO: Surrogate recovery for the following sample was outside control limits: TP24-09 6ft (885-8089-14). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8015D_GRO: Surrogate recovery for the following sample was outside control limits: TP24-08 4ft (885-8089-11). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8015D_GRO: Surrogate recovery for the following sample was outside control limits: TP24-07 4ft (885-8089-10). 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 VOA

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

Diesel Range Organics

Method 8015D_DRO: Surrogate recovery for the following samples were outside the upper control limit: TP24-05 4ft (885-8089-4), TP24-06 0ft (885-8089-5) and TP24-06 2ft (885-8089-6). This sample did not contain any target analytes; therefore, re-extraction and/or re-analysis was not performed.

Method 8015D_DRO: The following samples were diluted due the nature of the sample matrix and abundance of target analytes: TP24-08 4ft (885-8089-11) and TP24-09 6ft (885-8089-14). As such, surrogate recoveries are below the calibration range or are not reported, and elevated reporting limits (RLs) are provided.

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.

Eurofins Albuquerque

Client Sample Results

Client: Vertex
Project/Site: Endurance Lariat Water Line

Job ID: 885-8089-1

Client Sample ID: TP24-04 4ft Lab Sample ID: 885-8089-1
Date Collected: 07/15/24 09:00 Matrix: Solid
Date Received: 07/17/24 07:18

Method: SW846 8015M/D - Gasoline Range Organics (GRO) (GC)									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Gasoline Range Organics [C6 - C10]	ND		4.9	mg/Kg		07/18/24 08:44	07/20/24 19:16		1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac	
4-Bromofluorobenzene (Surr)	97		35 - 166			07/18/24 08:44	07/20/24 19:16		1
Method: SW846 8021B - Volatile Organic Compounds (GC)									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Benzene	ND		0.024	mg/Kg		07/18/24 08:44	07/20/24 19:16		1
Ethylbenzene	ND		0.049	mg/Kg		07/18/24 08:44	07/20/24 19:16		1
Toluene	ND		0.049	mg/Kg		07/18/24 08:44	07/20/24 19:16		1
Xylenes, Total	ND		0.097	mg/Kg		07/18/24 08:44	07/20/24 19:16		1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac	
4-Bromofluorobenzene (Surr)	89		48 - 145			07/18/24 08:44	07/20/24 19:16		1
Method: SW846 8015M/D - Diesel Range Organics (DRO) (GC)									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Diesel Range Organics [C10-C28]	ND		9.5	mg/Kg		07/18/24 14:33	07/20/24 04:38		1
Motor Oil Range Organics [C28-C40]	ND		48	mg/Kg		07/18/24 14:33	07/20/24 04:38		1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac	
Di-n-octyl phthalate (Surr)	114		62 - 134			07/18/24 14:33	07/20/24 04:38		1
Method: EPA 300.0 - Anions, Ion Chromatography									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Chloride	2800		150	mg/Kg		07/19/24 07:51	07/21/24 02:43		50

Client Sample Results

Client: Vertex
Project/Site: Endurance Lariat Water Line

Job ID: 885-8089-1

Client Sample ID: TP24-05 0ft Lab Sample ID: 885-8089-2
Date Collected: 07/15/24 09:30 Matrix: Solid
Date Received: 07/17/24 07:18

Method: SW846 8015M/D - Gasoline Range Organics (GRO) (GC)									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Gasoline Range Organics [C6 - C10]	ND		4.8	mg/Kg		07/18/24 08:44	07/20/24 19:40	1	
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac	
4-Bromofluorobenzene (Surr)	107		35 - 166			07/18/24 08:44	07/20/24 19:40	1	
Method: SW846 8021B - Volatile Organic Compounds (GC)									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Benzene	ND		0.024	mg/Kg		07/18/24 08:44	07/20/24 19:40	1	
Ethylbenzene	ND		0.048	mg/Kg		07/18/24 08:44	07/20/24 19:40	1	
Toluene	ND		0.048	mg/Kg		07/18/24 08:44	07/20/24 19:40	1	
Xylenes, Total	0.099		0.095	mg/Kg		07/18/24 08:44	07/20/24 19:40	1	
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac	
4-Bromofluorobenzene (Surr)	93		48 - 145			07/18/24 08:44	07/20/24 19:40	1	
Method: SW846 8015M/D - Diesel Range Organics (DRO) (GC)									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Diesel Range Organics [C10-C28]	150		9.0	mg/Kg		07/18/24 14:33	07/20/24 04:50	1	
Motor Oil Range Organics [C28-C40]	190		45	mg/Kg		07/18/24 14:33	07/20/24 04:50	1	
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac	
Di-n-octyl phthalate (Surr)	122		62 - 134			07/18/24 14:33	07/20/24 04:50	1	
Method: EPA 300.0 - Anions, Ion Chromatography									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Chloride	230		60	mg/Kg		07/19/24 07:51	07/19/24 09:46	20	

Client Sample Results

Client: Vertex
Project/Site: Endurance Lariat Water Line

Job ID: 885-8089-1

Client Sample ID: TP24-05 2ft Lab Sample ID: 885-8089-3
Date Collected: 07/15/24 09:45 Matrix: Solid
Date Received: 07/17/24 07:18

Method: SW846 8015M/D - Gasoline Range Organics (GRO) (GC)									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Gasoline Range Organics [C6 - C10]	ND		4.8	mg/Kg		07/18/24 08:44	07/20/24 20:03	1	
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac	
4-Bromofluorobenzene (Surr)	95		35 - 166			07/18/24 08:44	07/20/24 20:03	1	
Method: SW846 8021B - Volatile Organic Compounds (GC)									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Benzene	ND		0.024	mg/Kg		07/18/24 08:44	07/20/24 20:03	1	
Ethylbenzene	ND		0.048	mg/Kg		07/18/24 08:44	07/20/24 20:03	1	
Toluene	ND		0.048	mg/Kg		07/18/24 08:44	07/20/24 20:03	1	
Xylenes, Total	ND		0.097	mg/Kg		07/18/24 08:44	07/20/24 20:03	1	
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac	
4-Bromofluorobenzene (Surr)	88		48 - 145			07/18/24 08:44	07/20/24 20:03	1	
Method: SW846 8015M/D - Diesel Range Organics (DRO) (GC)									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Diesel Range Organics [C10-C28]	ND		9.7	mg/Kg		07/18/24 14:33	07/20/24 05:01	1	
Motor Oil Range Organics [C28-C40]	ND		48	mg/Kg		07/18/24 14:33	07/20/24 05:01	1	
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac	
Di-n-octyl phthalate (Surr)	116		62 - 134			07/18/24 14:33	07/20/24 05:01	1	
Method: EPA 300.0 - Anions, Ion Chromatography									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Chloride	390		60	mg/Kg		07/19/24 07:51	07/19/24 10:01	20	

Client Sample Results

Client: Vertex
Project/Site: Endurance Lariat Water Line

Job ID: 885-8089-1

Client Sample ID: TP24-05 4ft Lab Sample ID: 885-8089-4
Date Collected: 07/15/24 10:00 Matrix: Solid
Date Received: 07/17/24 07:18

Method: SW846 8015M/D - Gasoline Range Organics (GRO) (GC)									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Gasoline Range Organics [C6 - C10]	ND		4.8	mg/Kg		07/18/24 08:44	07/20/24 21:14	1	
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac	
4-Bromofluorobenzene (Surr)	98		35 - 166			07/18/24 08:44	07/20/24 21:14	1	

Method: SW846 8021B - Volatile Organic Compounds (GC)									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Benzene	ND		0.024	mg/Kg		07/18/24 08:44	07/20/24 21:14	1	
Ethylbenzene	ND		0.048	mg/Kg		07/18/24 08:44	07/20/24 21:14	1	
Toluene	ND		0.048	mg/Kg		07/18/24 08:44	07/20/24 21:14	1	
Xylenes, Total	ND		0.095	mg/Kg		07/18/24 08:44	07/20/24 21:14	1	
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac	
4-Bromofluorobenzene (Surr)	92		48 - 145			07/18/24 08:44	07/20/24 21:14	1	

Method: SW846 8015M/D - Diesel Range Organics (DRO) (GC)									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Diesel Range Organics [C10-C28]	ND		9.1	mg/Kg		07/18/24 14:33	07/20/24 05:23	1	
Motor Oil Range Organics [C28-C40]	ND		45	mg/Kg		07/18/24 14:33	07/20/24 05:23	1	
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac	
Di-n-octyl phthalate (Surr)	143	S1+	62 - 134			07/18/24 14:33	07/20/24 05:23	1	

Method: EPA 300.0 - Anions, Ion Chromatography									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Chloride	580		59	mg/Kg		07/19/24 07:51	07/19/24 10:16	20	

Client Sample Results

Client: Vertex
Project/Site: Endurance Lariat Water Line

Job ID: 885-8089-1

Client Sample ID: TP24-06 0ft Lab Sample ID: 885-8089-5
Date Collected: 07/15/24 10:15 Matrix: Solid
Date Received: 07/17/24 07:18

Method: SW846 8015M/D - Gasoline Range Organics (GRO) (GC)									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Gasoline Range Organics [C6 - C10]	ND		4.7	mg/Kg		07/18/24 08:44	07/20/24 21:37	1	
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac	
4-Bromofluorobenzene (Surr)	99		35 - 166			07/18/24 08:44	07/20/24 21:37	1	

Method: SW846 8021B - Volatile Organic Compounds (GC)									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Benzene	ND		0.023	mg/Kg		07/18/24 08:44	07/20/24 21:37	1	
Ethylbenzene	ND		0.047	mg/Kg		07/18/24 08:44	07/20/24 21:37	1	
Toluene	ND		0.047	mg/Kg		07/18/24 08:44	07/20/24 21:37	1	
Xylenes, Total	ND		0.093	mg/Kg		07/18/24 08:44	07/20/24 21:37	1	
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac	
4-Bromofluorobenzene (Surr)	92		48 - 145			07/18/24 08:44	07/20/24 21:37	1	

Method: SW846 8015M/D - Diesel Range Organics (DRO) (GC)									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Diesel Range Organics [C10-C28]	ND		9.4	mg/Kg		07/18/24 14:33	07/20/24 05:34	1	
Motor Oil Range Organics [C28-C40]	ND		47	mg/Kg		07/18/24 14:33	07/20/24 05:34	1	
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac	
Di-n-octyl phthalate (Surr)	148	S1+	62 - 134			07/18/24 14:33	07/20/24 05:34	1	

Method: EPA 300.0 - Anions, Ion Chromatography									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Chloride	ND		60	mg/Kg		07/19/24 07:51	07/19/24 10:31	20	

Client Sample Results

Client: Vertex
Project/Site: Endurance Lariat Water Line

Job ID: 885-8089-1

Client Sample ID: TP24-06 2ft Lab Sample ID: 885-8089-6
Date Collected: 07/15/24 10:30 Matrix: Solid
Date Received: 07/17/24 07:18

Method: SW846 8015M/D - Gasoline Range Organics (GRO) (GC)									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Gasoline Range Organics [C6 - C10]	ND		4.9	mg/Kg		07/18/24 08:44	07/20/24 22:01		1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac	
4-Bromofluorobenzene (Surr)	97		35 - 166			07/18/24 08:44	07/20/24 22:01		1
Method: SW846 8021B - Volatile Organic Compounds (GC)									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Benzene	ND		0.025	mg/Kg		07/18/24 08:44	07/20/24 22:01		1
Ethylbenzene	ND		0.049	mg/Kg		07/18/24 08:44	07/20/24 22:01		1
Toluene	ND		0.049	mg/Kg		07/18/24 08:44	07/20/24 22:01		1
Xylenes, Total	ND		0.099	mg/Kg		07/18/24 08:44	07/20/24 22:01		1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac	
4-Bromofluorobenzene (Surr)	92		48 - 145			07/18/24 08:44	07/20/24 22:01		1
Method: SW846 8015M/D - Diesel Range Organics (DRO) (GC)									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Diesel Range Organics [C10-C28]	ND		9.1	mg/Kg		07/18/24 14:33	07/20/24 05:46		1
Motor Oil Range Organics [C28-C40]	ND		46	mg/Kg		07/18/24 14:33	07/20/24 05:46		1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac	
Di-n-octyl phthalate (Surr)	160	S1+	62 - 134			07/18/24 14:33	07/20/24 05:46		1
Method: EPA 300.0 - Anions, Ion Chromatography									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Chloride	ND		60	mg/Kg		07/19/24 07:51	07/19/24 12:37		20

Client Sample Results

Client: Vertex
Project/Site: Endurance Lariat Water Line

Job ID: 885-8089-1

Client Sample ID: TP24-06 4ft Lab Sample ID: 885-8089-7
Date Collected: 07/15/24 10:45 Matrix: Solid
Date Received: 07/17/24 07:18

Method: SW846 8015M/D - Gasoline Range Organics (GRO) (GC)									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Gasoline Range Organics [C6 - C10]	ND		4.9	mg/Kg		07/18/24 08:44	07/20/24 22:24	1	
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac	
4-Bromofluorobenzene (Surr)	98		35 - 166			07/18/24 08:44	07/20/24 22:24	1	
Method: SW846 8021B - Volatile Organic Compounds (GC)									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Benzene	ND		0.024	mg/Kg		07/18/24 08:44	07/20/24 22:24	1	
Ethylbenzene	ND		0.049	mg/Kg		07/18/24 08:44	07/20/24 22:24	1	
Toluene	ND		0.049	mg/Kg		07/18/24 08:44	07/20/24 22:24	1	
Xylenes, Total	ND		0.097	mg/Kg		07/18/24 08:44	07/20/24 22:24	1	
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac	
4-Bromofluorobenzene (Surr)	92		48 - 145			07/18/24 08:44	07/20/24 22:24	1	
Method: SW846 8015M/D - Diesel Range Organics (DRO) (GC)									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Diesel Range Organics [C10-C28]	ND		9.5	mg/Kg		07/18/24 14:33	07/20/24 05:57	1	
Motor Oil Range Organics [C28-C40]	ND		48	mg/Kg		07/18/24 14:33	07/20/24 05:57	1	
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac	
Di-n-octyl phthalate (Surr)	114		62 - 134			07/18/24 14:33	07/20/24 05:57	1	
Method: EPA 300.0 - Anions, Ion Chromatography									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Chloride	ND		60	mg/Kg		07/19/24 07:51	07/19/24 12:52	20	

Client Sample Results

Client: Vertex

Project/Site: Endurance Lariat Water Line

Job ID: 885-8089-1

Client Sample ID: TP24-07 0ft

Lab Sample ID: 885-8089-8

Date Collected: 07/15/24 11:00

Matrix: Solid

Date Received: 07/17/24 07:18

Method: SW846 8015M/D - Gasoline Range Organics (GRO) (GC)									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Gasoline Range Organics [C6 - C10]	6.6		4.8	mg/Kg		07/18/24 08:44	07/20/24 22:48	1	
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac	
4-Bromofluorobenzene (Surr)	130		35 - 166			07/18/24 08:44	07/20/24 22:48	1	
Method: SW846 8021B - Volatile Organic Compounds (GC)									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Benzene	ND		0.024	mg/Kg		07/18/24 08:44	07/20/24 22:48	1	
Ethylbenzene	ND		0.048	mg/Kg		07/18/24 08:44	07/20/24 22:48	1	
Toluene	0.054		0.048	mg/Kg		07/18/24 08:44	07/20/24 22:48	1	
Xylenes, Total	0.70		0.096	mg/Kg		07/18/24 08:44	07/20/24 22:48	1	
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac	
4-Bromofluorobenzene (Surr)	91		48 - 145			07/18/24 08:44	07/20/24 22:48	1	
Method: SW846 8015M/D - Diesel Range Organics (DRO) (GC)									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Diesel Range Organics [C10-C28]	440		9.4	mg/Kg		07/18/24 14:33	07/20/24 06:08	1	
Motor Oil Range Organics [C28-C40]	420		47	mg/Kg		07/18/24 14:33	07/20/24 06:08	1	
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac	
Di-n-octyl phthalate (Surr)	126		62 - 134			07/18/24 14:33	07/20/24 06:08	1	
Method: EPA 300.0 - Anions, Ion Chromatography									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Chloride	410		60	mg/Kg		07/19/24 07:51	07/19/24 13:07	20	

Client Sample Results

Client: Vertex
Project/Site: Endurance Lariat Water Line

Job ID: 885-8089-1

Client Sample ID: TP24-07 2ft Lab Sample ID: 885-8089-9
Date Collected: 07/15/24 11:10 Matrix: Solid
Date Received: 07/17/24 07:18

Method: SW846 8015M/D - Gasoline Range Organics (GRO) (GC)									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Gasoline Range Organics [C6 - C10]	ND		4.8	mg/Kg		07/18/24 08:44	07/20/24 23:11	1	
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac	
4-Bromofluorobenzene (Surr)	96		35 - 166			07/18/24 08:44	07/20/24 23:11	1	

Method: SW846 8021B - Volatile Organic Compounds (GC)									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Benzene	ND		0.024	mg/Kg		07/18/24 08:44	07/20/24 23:11	1	
Ethylbenzene	ND		0.048	mg/Kg		07/18/24 08:44	07/20/24 23:11	1	
Toluene	ND		0.048	mg/Kg		07/18/24 08:44	07/20/24 23:11	1	
Xylenes, Total	ND		0.097	mg/Kg		07/18/24 08:44	07/20/24 23:11	1	
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac	
4-Bromofluorobenzene (Surr)	89		48 - 145			07/18/24 08:44	07/20/24 23:11	1	

Method: SW846 8015M/D - Diesel Range Organics (DRO) (GC)									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Diesel Range Organics [C10-C28]	48		9.8	mg/Kg		07/18/24 14:33	07/22/24 19:26	1	
Motor Oil Range Organics [C28-C40]	ND		49	mg/Kg		07/18/24 14:33	07/22/24 19:26	1	
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac	
Di-n-octyl phthalate (Surr)	105		62 - 134			07/18/24 14:33	07/22/24 19:26	1	

Method: EPA 300.0 - Anions, Ion Chromatography									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Chloride	630		60	mg/Kg		07/19/24 07:51	07/19/24 13:22	20	

Client Sample Results

Client: Vertex

Job ID: 885-8089-1

Project/Site: Endurance Lariat Water Line

Client Sample ID: TP24-07 4ft

Lab Sample ID: 885-8089-10

Date Collected: 07/15/24 11:20

Matrix: Solid

Date Received: 07/17/24 07:18

Method: SW846 8015M/D - Gasoline Range Organics (GRO) (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics [C6 - C10]	11		5.0	mg/Kg		07/18/24 08:44	07/20/24 23:35	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	223	S1+	35 - 166			07/18/24 08:44	07/20/24 23:35	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.025	mg/Kg		07/18/24 08:44	07/20/24 23:35	1
Ethylbenzene	ND		0.050	mg/Kg		07/18/24 08:44	07/20/24 23:35	1
Toluene	ND		0.050	mg/Kg		07/18/24 08:44	07/20/24 23:35	1
Xylenes, Total	ND		0.099	mg/Kg		07/18/24 08:44	07/20/24 23:35	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	99		48 - 145			07/18/24 08:44	07/20/24 23:35	1

Method: SW846 8015M/D - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	1500		45	mg/Kg		07/18/24 14:33	07/22/24 19:49	5
Motor Oil Range Organics [C28-C40]	700		230	mg/Kg		07/18/24 14:33	07/22/24 19:49	5
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
Di-n-octyl phthalate (Surr)	99		62 - 134			07/18/24 14:33	07/22/24 19:49	5

Method: EPA 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	2200		60	mg/Kg		07/19/24 07:51	07/19/24 14:38	20

Eurofins Albuquerque

Client Sample Results

Client: Vertex

Job ID: 885-8089-1

Project/Site: Endurance Lariat Water Line

Client Sample ID: TP24-08 4ft

Lab Sample ID: 885-8089-11

Date Collected: 07/15/24 11:45

Matrix: Solid

Date Received: 07/17/24 07:18

Method: SW846 8015M/D - Gasoline Range Organics (GRO) (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics [C6 - C10]	560		24	mg/Kg		07/18/24 10:38	07/20/24 07:09	5
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	313	S1+	35 - 166			07/18/24 10:38	07/20/24 07:09	5

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.12	mg/Kg		07/18/24 10:38	07/20/24 07:09	5
Ethylbenzene	0.89		0.24	mg/Kg		07/18/24 10:38	07/20/24 07:09	5
Toluene	0.67		0.24	mg/Kg		07/18/24 10:38	07/20/24 07:09	5
Xylenes, Total	19		0.48	mg/Kg		07/18/24 10:38	07/20/24 07:09	5
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	134		48 - 145			07/18/24 10:38	07/20/24 07:09	5

Method: SW846 8015M/D - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	5800		97	mg/Kg		07/19/24 10:36	07/19/24 22:16	10
Motor Oil Range Organics [C28-C40]	1700		490	mg/Kg		07/19/24 10:36	07/19/24 22:16	10
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
Di-n-octyl phthalate (Surr)	0	D S1-	62 - 134			07/19/24 10:36	07/19/24 22:16	10

Method: EPA 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	2100		150	mg/Kg		07/19/24 13:21	07/21/24 02:55	50

Eurofins Albuquerque

Client Sample Results

Client: Vertex

Project/Site: Endurance Lariat Water Line

Job ID: 885-8089-1

Client Sample ID: TP24-08 12ft

Lab Sample ID: 885-8089-12

Date Collected: 07/15/24 14:00

Matrix: Solid

Date Received: 07/17/24 07:18

Method: SW846 8015M/D - Gasoline Range Organics (GRO) (GC)									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Gasoline Range Organics [C6 - C10]	14		4.7	mg/Kg		07/18/24 10:38	07/20/24 07:32	1	
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac	
4-Bromofluorobenzene (Surr)	223	S1+	35 - 166			07/18/24 10:38	07/20/24 07:32	1	

Method: SW846 8021B - Volatile Organic Compounds (GC)									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Benzene	ND		0.023	mg/Kg		07/18/24 10:38	07/20/24 07:32	1	
Ethylbenzene	0.056		0.047	mg/Kg		07/18/24 10:38	07/20/24 07:32	1	
Toluene	ND		0.047	mg/Kg		07/18/24 10:38	07/20/24 07:32	1	
Xylenes, Total	0.32		0.094	mg/Kg		07/18/24 10:38	07/20/24 07:32	1	
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac	
4-Bromofluorobenzene (Surr)	104		48 - 145			07/18/24 10:38	07/20/24 07:32	1	

Method: SW846 8015M/D - Diesel Range Organics (DRO) (GC)									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Diesel Range Organics [C10-C28]	420		9.8	mg/Kg		07/19/24 10:36	07/19/24 22:30	1	
Motor Oil Range Organics [C28-C40]	180		49	mg/Kg		07/19/24 10:36	07/19/24 22:30	1	
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac	
Di-n-octyl phthalate (Surr)	104		62 - 134			07/19/24 10:36	07/19/24 22:30	1	

Method: EPA 300.0 - Anions, Ion Chromatography									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Chloride	ND		60	mg/Kg		07/19/24 13:21	07/19/24 15:38	20	

Client Sample Results

Client: Vertex

Project/Site: Endurance Lariat Water Line

Job ID: 885-8089-1

Client Sample ID: TP24-09 0ft

Lab Sample ID: 885-8089-13

Date Collected: 07/15/24 16:00

Matrix: Solid

Date Received: 07/17/24 07:18

Method: SW846 8015M/D - Gasoline Range Organics (GRO) (GC)									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Gasoline Range Organics [C6 - C10]	ND		4.9	mg/Kg		07/18/24 10:38	07/20/24 07:56	1	
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac	
4-Bromofluorobenzene (Surr)	123		35 - 166			07/18/24 10:38	07/20/24 07:56	1	
Method: SW846 8021B - Volatile Organic Compounds (GC)									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Benzene	ND		0.025	mg/Kg		07/18/24 10:38	07/20/24 07:56	1	
Ethylbenzene	ND		0.049	mg/Kg		07/18/24 10:38	07/20/24 07:56	1	
Toluene	ND		0.049	mg/Kg		07/18/24 10:38	07/20/24 07:56	1	
Xylenes, Total	ND		0.099	mg/Kg		07/18/24 10:38	07/20/24 07:56	1	
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac	
4-Bromofluorobenzene (Surr)	94		48 - 145			07/18/24 10:38	07/20/24 07:56	1	
Method: SW846 8015M/D - Diesel Range Organics (DRO) (GC)									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Diesel Range Organics [C10-C28]	69		9.8	mg/Kg		07/19/24 10:36	07/19/24 22:43	1	
Motor Oil Range Organics [C28-C40]	81		49	mg/Kg		07/19/24 10:36	07/19/24 22:43	1	
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac	
Di-n-octyl phthalate (Surr)	105		62 - 134			07/19/24 10:36	07/19/24 22:43	1	
Method: EPA 300.0 - Anions, Ion Chromatography									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Chloride	1000		60	mg/Kg		07/19/24 13:21	07/19/24 16:42	20	

Client Sample Results

Client: Vertex

Job ID: 885-8089-1

Project/Site: Endurance Lariat Water Line

Client Sample ID: TP24-09 6ft

Lab Sample ID: 885-8089-14

Date Collected: 07/15/24 16:30

Matrix: Solid

Date Received: 07/17/24 07:18

Method: SW846 8015M/D - Gasoline Range Organics (GRO) (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics [C6 - C10]	200		25	mg/Kg		07/18/24 10:38	07/20/24 08:19	5
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	370	S1+	35 - 166			07/18/24 10:38	07/20/24 08:19	5

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.12	mg/Kg		07/18/24 10:38	07/20/24 08:19	5
Ethylbenzene	0.41		0.25	mg/Kg		07/18/24 10:38	07/20/24 08:19	5
Toluene	ND		0.25	mg/Kg		07/18/24 10:38	07/20/24 08:19	5
Xylenes, Total	4.0		0.49	mg/Kg		07/18/24 10:38	07/20/24 08:19	5
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	109		48 - 145			07/18/24 10:38	07/20/24 08:19	5

Method: SW846 8015M/D - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	4000		100	mg/Kg		07/19/24 10:36	07/19/24 22:57	10
Motor Oil Range Organics [C28-C40]	1500		500	mg/Kg		07/19/24 10:36	07/19/24 22:57	10
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
Di-n-octyl phthalate (Surr)	0	D S1-	62 - 134			07/19/24 10:36	07/19/24 22:57	10

Method: EPA 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	3700		300	mg/Kg		07/19/24 13:21	07/21/24 03:32	100

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Client Sample Results

Client: Vertex
Project/Site: Endurance Lariat Water Line

Job ID: 885-8089-1

Client Sample ID: TP24-09 12ft Lab Sample ID: 885-8089-15
Date Collected: 07/15/24 17:00 Matrix: Solid
Date Received: 07/17/24 07:18

Method: SW846 8015M/D - Gasoline Range Organics (GRO) (GC)									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Gasoline Range Organics [C6 - C10]	ND		4.9	mg/Kg		07/18/24 10:38	07/20/24 09:29	1	
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac	
4-Bromofluorobenzene (Surr)	118		35 - 166			07/18/24 10:38	07/20/24 09:29	1	
Method: SW846 8021B - Volatile Organic Compounds (GC)									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Benzene	ND		0.025	mg/Kg		07/18/24 10:38	07/20/24 09:29	1	
Ethylbenzene	ND		0.049	mg/Kg		07/18/24 10:38	07/20/24 09:29	1	
Toluene	ND		0.049	mg/Kg		07/18/24 10:38	07/20/24 09:29	1	
Xylenes, Total	ND		0.098	mg/Kg		07/18/24 10:38	07/20/24 09:29	1	
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac	
4-Bromofluorobenzene (Surr)	95		48 - 145			07/18/24 10:38	07/20/24 09:29	1	
Method: SW846 8015M/D - Diesel Range Organics (DRO) (GC)									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Diesel Range Organics [C10-C28]	300		9.8	mg/Kg		07/19/24 10:36	07/19/24 23:24	1	
Motor Oil Range Organics [C28-C40]	150		49	mg/Kg		07/19/24 10:36	07/19/24 23:24	1	
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac	
Di-n-octyl phthalate (Surr)	102		62 - 134			07/19/24 10:36	07/19/24 23:24	1	
Method: EPA 300.0 - Anions, Ion Chromatography									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Chloride	980		60	mg/Kg		07/19/24 13:21	07/19/24 17:34	20	

QC Sample Results

Client: Vertex

Job ID: 885-8089-1

Project/Site: Endurance Lariat Water Line

Method: 8015M/D - Gasoline Range Organics (GRO) (GC)

Lab Sample ID: MB 885-8633/1-A

Matrix: Solid

Analysis Batch: 8807

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 8633

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics [C6 - C10]	ND		5.0	mg/Kg		07/18/24 08:44	07/20/24 13:00	1
Surrogate	MB %Recovery	MB Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	99		35 - 166			07/18/24 08:44	07/20/24 13:00	1

Lab Sample ID: LCS 885-8633/2-A

Matrix: Solid

Analysis Batch: 8807

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 8633

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits	
Gasoline Range Organics [C6 - C10]	25.0	21.2		mg/Kg		85	70 - 130	
Surrogate	LCS %Recovery	LCS Qualifier	Limits					
4-Bromofluorobenzene (Surr)	208	S1+	35 - 166					

Lab Sample ID: MB 885-8646/1-A

Matrix: Solid

Analysis Batch: 8807

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 8646

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics [C6 - C10]	ND		5.0	mg/Kg		07/18/24 10:38	07/20/24 01:17	1
Surrogate	MB %Recovery	MB Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	96		35 - 166			07/18/24 10:38	07/20/24 01:17	1

Lab Sample ID: LCS 885-8646/2-A

Matrix: Solid

Analysis Batch: 8807

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 8646

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits	
Gasoline Range Organics [C6 - C10]	25.0	20.7		mg/Kg		83	70 - 130	
Surrogate	LCS %Recovery	LCS Qualifier	Limits					
4-Bromofluorobenzene (Surr)	198	S1+	35 - 166					

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 885-8633/1-A

Matrix: Solid

Analysis Batch: 8808

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 8633

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.025	mg/Kg		07/18/24 08:44	07/20/24 13:00	1
Ethylbenzene	ND		0.050	mg/Kg		07/18/24 08:44	07/20/24 13:00	1
Toluene	ND		0.050	mg/Kg		07/18/24 08:44	07/20/24 13:00	1
Xylenes, Total	ND		0.10	mg/Kg		07/18/24 08:44	07/20/24 13:00	1

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QC Sample Results

Client: Vertex

Job ID: 885-8089-1

Project/Site: Endurance Lariat Water Line

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

Lab Sample ID: MB 885-8633/1-A

Matrix: Solid

Analysis Batch: 8808

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 8633

	MB	MB							
Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil	Fac		
4-Bromofluorobenzene (Surr)	93		48 - 145	07/18/24 08:44	07/20/24 13:00	1			

Lab Sample ID: LCS 885-8633/3-A

Matrix: Solid

Analysis Batch: 8808

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 8633

	Spike	LCS	LCS					%Rec	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits		
Benzene	1.00	0.812		mg/Kg		81	70 - 130		
Ethylbenzene	1.00	0.771		mg/Kg		77	70 - 130		
m,p-Xylene	2.00	1.55		mg/Kg		78	70 - 130		
o-Xylene	1.00	0.758		mg/Kg		76	70 - 130		
Toluene	1.00	0.769		mg/Kg		77	70 - 130		

	LCS	LCS							
Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil	Fac		
4-Bromofluorobenzene (Surr)	95		48 - 145						

Lab Sample ID: MB 885-8646/1-A

Matrix: Solid

Analysis Batch: 8808

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 8646

	MB	MB							
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil	Fac
Benzene	ND		0.025	mg/Kg		07/18/24 10:38	07/20/24 01:17	1	
Ethylbenzene	ND		0.050	mg/Kg		07/18/24 10:38	07/20/24 01:17	1	
Toluene	ND		0.050	mg/Kg		07/18/24 10:38	07/20/24 01:17	1	
Xylenes, Total	ND		0.10	mg/Kg		07/18/24 10:38	07/20/24 01:17	1	

	MB	MB							
Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil	Fac		
4-Bromofluorobenzene (Surr)	90		48 - 145	07/18/24 10:38	07/20/24 01:17	1			

Lab Sample ID: LCS 885-8646/3-A

Matrix: Solid

Analysis Batch: 8808

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 8646

	Spike	LCS	LCS					%Rec	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits		
Benzene	1.00	0.788		mg/Kg		79	70 - 130		
Ethylbenzene	1.00	0.752		mg/Kg		75	70 - 130		
m,p-Xylene	2.00	1.51		mg/Kg		76	70 - 130		
o-Xylene	1.00	0.737		mg/Kg		74	70 - 130		
Toluene	1.00	0.755		mg/Kg		75	70 - 130		

	LCS	LCS							
Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil	Fac		
4-Bromofluorobenzene (Surr)	93		48 - 145						

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QC Sample Results

Client: Vertex
Project/Site: Endurance Lariat Water Line

Job ID: 885-8089-1

Method: 8015M/D - Diesel Range Organics (DRO) (GC)

Lab Sample ID: MB 885-8702/1-A						Client Sample ID: Method Blank			
Matrix: Solid						Prep Type: Total/NA			
Analysis Batch: 8751						Prep Batch: 8702			
Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Diesel Range Organics [C10-C28]	ND		10	mg/Kg		07/18/24 14:33	07/20/24 02:13	1	
Motor Oil Range Organics [C28-C40]	ND		50	mg/Kg		07/18/24 14:33	07/20/24 02:13	1	
Surrogate	MB %Recovery	MB Qualifier	Limits			Prepared	Analyzed	Dil Fac	
Di-n-octyl phthalate (Surr)	115		62 - 134			07/18/24 14:33	07/20/24 02:13	1	

Lab Sample ID: LCS 885-8702/2-A						Client Sample ID: Lab Control Sample			
Matrix: Solid						Prep Type: Total/NA			
Analysis Batch: 8751						Prep Batch: 8702			
Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Diesel Range Organics [C10-C28]			50.0	55.1		mg/Kg		110	60 - 135
Surrogate	LCS %Recovery	LCS Qualifier	Limits						
Di-n-octyl phthalate (Surr)	105		62 - 134						

Lab Sample ID: MB 885-8772/1-A						Client Sample ID: Method Blank			
Matrix: Solid						Prep Type: Total/NA			
Analysis Batch: 8775						Prep Batch: 8772			
Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Diesel Range Organics [C10-C28]	ND		10	mg/Kg		07/19/24 10:36	07/19/24 20:40	1	
Motor Oil Range Organics [C28-C40]	ND		50	mg/Kg		07/19/24 10:36	07/19/24 20:40	1	
Surrogate	MB %Recovery	MB Qualifier	Limits			Prepared	Analyzed	Dil Fac	
Di-n-octyl phthalate (Surr)	103		62 - 134			07/19/24 10:36	07/19/24 20:40	1	

Lab Sample ID: LCS 885-8772/2-A						Client Sample ID: Lab Control Sample			
Matrix: Solid						Prep Type: Total/NA			
Analysis Batch: 8775						Prep Batch: 8772			
Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Diesel Range Organics [C10-C28]			50.0	50.0		mg/Kg		100	60 - 135
Surrogate	LCS %Recovery	LCS Qualifier	Limits						
Di-n-octyl phthalate (Surr)	101		62 - 134						

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 885-8739/1-A						Client Sample ID: Method Blank			
Matrix: Solid						Prep Type: Total/NA			
Analysis Batch: 8813						Prep Batch: 8739			
Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Chloride	ND		3.0	mg/Kg		07/19/24 07:51	07/19/24 08:16	1	

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QC Sample Results

Client: Vertex

Job ID: 885-8089-1

Project/Site: Endurance Lariat Water Line

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: LCS 885-8739/2-A

Matrix: Solid

Analysis Batch: 8813

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 8739

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	30.0	29.3		mg/Kg		98	90 - 110

Lab Sample ID: 885-8089-9 MS

Matrix: Solid

Analysis Batch: 8813

Client Sample ID: TP24-07 2ft

Prep Type: Total/NA

Prep Batch: 8739

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	630		29.8	649	4	mg/Kg		61	50 - 150

Lab Sample ID: 885-8089-9 MSD

Matrix: Solid

Analysis Batch: 8813

Client Sample ID: TP24-07 2ft

Prep Type: Total/NA

Prep Batch: 8739

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	630		29.7	663	4	mg/Kg		106	50 - 150	2	20

Lab Sample ID: 885-8089-10 MS

Matrix: Solid

Analysis Batch: 8813

Client Sample ID: TP24-07 4ft

Prep Type: Total/NA

Prep Batch: 8739

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	2200		29.9	2180	4	mg/Kg		75	50 - 150

Lab Sample ID: 885-8089-10 MSD

Matrix: Solid

Analysis Batch: 8813

Client Sample ID: TP24-07 4ft

Prep Type: Total/NA

Prep Batch: 8739

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	2200		30.1	2220	4	mg/Kg		178	50 - 150	1	20

Lab Sample ID: MB 885-8800/1-A

Matrix: Solid

Analysis Batch: 8833

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 8800

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		3.0	mg/Kg		07/19/24 13:21	07/19/24 14:59	1

Lab Sample ID: LCS 885-8800/2-A

Matrix: Solid

Analysis Batch: 8833

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 8800

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	30.0	31.3		mg/Kg		104	90 - 110

Lab Sample ID: MB 885-8838/10

Matrix: Solid

Analysis Batch: 8838

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		0.50	mg/Kg			07/20/24 10:40	1

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QC Sample Results

Client: Vertex
Project/Site: Endurance Lariat Water Line

Job ID: 885-8089-1

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MRL 885-8838/9				Client Sample ID: Lab Control Sample			
Matrix: Solid				Prep Type: Total/NA			
Analysis Batch: 8838							
Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	0.500	0.524		mg/L		105	50 - 150

QC Association Summary

Client: Vertex

Job ID: 885-8089-1

Project/Site: Endurance Lariat Water Line

GC VOA

Prep Batch: 8633

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-8089-1	TP24-04 4ft	Total/NA	Solid	5030C	
885-8089-2	TP24-05 0ft	Total/NA	Solid	5030C	
885-8089-3	TP24-05 2ft	Total/NA	Solid	5030C	
885-8089-4	TP24-05 4ft	Total/NA	Solid	5030C	
885-8089-5	TP24-06 0ft	Total/NA	Solid	5030C	
885-8089-6	TP24-06 2ft	Total/NA	Solid	5030C	
885-8089-7	TP24-06 4ft	Total/NA	Solid	5030C	
885-8089-8	TP24-07 0ft	Total/NA	Solid	5030C	
885-8089-9	TP24-07 2ft	Total/NA	Solid	5030C	
885-8089-10	TP24-07 4ft	Total/NA	Solid	5030C	
MB 885-8633/1-A	Method Blank	Total/NA	Solid	5030C	
LCS 885-8633/2-A	Lab Control Sample	Total/NA	Solid	5030C	
LCS 885-8633/3-A	Lab Control Sample	Total/NA	Solid	5030C	

Prep Batch: 8646

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-8089-11	TP24-08 4ft	Total/NA	Solid	5030C	
885-8089-12	TP24-08 12ft	Total/NA	Solid	5030C	
885-8089-13	TP24-09 0ft	Total/NA	Solid	5030C	
885-8089-14	TP24-09 6ft	Total/NA	Solid	5030C	
885-8089-15	TP24-09 12ft	Total/NA	Solid	5030C	
MB 885-8646/1-A	Method Blank	Total/NA	Solid	5030C	
LCS 885-8646/2-A	Lab Control Sample	Total/NA	Solid	5030C	
LCS 885-8646/3-A	Lab Control Sample	Total/NA	Solid	5030C	

Analysis Batch: 8807

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-8089-1	TP24-04 4ft	Total/NA	Solid	8015M/D	8633
885-8089-2	TP24-05 0ft	Total/NA	Solid	8015M/D	8633
885-8089-3	TP24-05 2ft	Total/NA	Solid	8015M/D	8633
885-8089-4	TP24-05 4ft	Total/NA	Solid	8015M/D	8633
885-8089-5	TP24-06 0ft	Total/NA	Solid	8015M/D	8633
885-8089-6	TP24-06 2ft	Total/NA	Solid	8015M/D	8633
885-8089-7	TP24-06 4ft	Total/NA	Solid	8015M/D	8633
885-8089-8	TP24-07 0ft	Total/NA	Solid	8015M/D	8633
885-8089-9	TP24-07 2ft	Total/NA	Solid	8015M/D	8633
885-8089-10	TP24-07 4ft	Total/NA	Solid	8015M/D	8633
885-8089-11	TP24-08 4ft	Total/NA	Solid	8015M/D	8646
885-8089-12	TP24-08 12ft	Total/NA	Solid	8015M/D	8646
885-8089-13	TP24-09 0ft	Total/NA	Solid	8015M/D	8646
885-8089-14	TP24-09 6ft	Total/NA	Solid	8015M/D	8646
885-8089-15	TP24-09 12ft	Total/NA	Solid	8015M/D	8646
MB 885-8633/1-A	Method Blank	Total/NA	Solid	8015M/D	8633
MB 885-8646/1-A	Method Blank	Total/NA	Solid	8015M/D	8646
LCS 885-8633/2-A	Lab Control Sample	Total/NA	Solid	8015M/D	8633
LCS 885-8646/2-A	Lab Control Sample	Total/NA	Solid	8015M/D	8646

Analysis Batch: 8808

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-8089-1	TP24-04 4ft	Total/NA	Solid	8021B	8633
885-8089-2	TP24-05 0ft	Total/NA	Solid	8021B	8633

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QC Association Summary

Client: Vertex
Project/Site: Endurance Lariat Water Line

Job ID: 885-8089-1

GC VOA (Continued)

Analysis Batch: 8808 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-8089-3	TP24-05 2ft	Total/NA	Solid	8021B	8633
885-8089-4	TP24-05 4ft	Total/NA	Solid	8021B	8633
885-8089-5	TP24-06 0ft	Total/NA	Solid	8021B	8633
885-8089-6	TP24-06 2ft	Total/NA	Solid	8021B	8633
885-8089-7	TP24-06 4ft	Total/NA	Solid	8021B	8633
885-8089-8	TP24-07 0ft	Total/NA	Solid	8021B	8633
885-8089-9	TP24-07 2ft	Total/NA	Solid	8021B	8633
885-8089-10	TP24-07 4ft	Total/NA	Solid	8021B	8633
885-8089-11	TP24-08 4ft	Total/NA	Solid	8021B	8646
885-8089-12	TP24-08 12ft	Total/NA	Solid	8021B	8646
885-8089-13	TP24-09 0ft	Total/NA	Solid	8021B	8646
885-8089-14	TP24-09 6ft	Total/NA	Solid	8021B	8646
885-8089-15	TP24-09 12ft	Total/NA	Solid	8021B	8646
MB 885-8633/1-A	Method Blank	Total/NA	Solid	8021B	8633
MB 885-8646/1-A	Method Blank	Total/NA	Solid	8021B	8646
LCS 885-8633/3-A	Lab Control Sample	Total/NA	Solid	8021B	8633
LCS 885-8646/3-A	Lab Control Sample	Total/NA	Solid	8021B	8646

GC Semi VOA

Prep Batch: 8702

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-8089-1	TP24-04 4ft	Total/NA	Solid	SHAKE	
885-8089-2	TP24-05 0ft	Total/NA	Solid	SHAKE	
885-8089-3	TP24-05 2ft	Total/NA	Solid	SHAKE	
885-8089-4	TP24-05 4ft	Total/NA	Solid	SHAKE	
885-8089-5	TP24-06 0ft	Total/NA	Solid	SHAKE	
885-8089-6	TP24-06 2ft	Total/NA	Solid	SHAKE	
885-8089-7	TP24-06 4ft	Total/NA	Solid	SHAKE	
885-8089-8	TP24-07 0ft	Total/NA	Solid	SHAKE	
885-8089-9	TP24-07 2ft	Total/NA	Solid	SHAKE	
885-8089-10	TP24-07 4ft	Total/NA	Solid	SHAKE	
MB 885-8702/1-A	Method Blank	Total/NA	Solid	SHAKE	
LCS 885-8702/2-A	Lab Control Sample	Total/NA	Solid	SHAKE	

Analysis Batch: 8751

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-8089-1	TP24-04 4ft	Total/NA	Solid	8015M/D	8702
885-8089-2	TP24-05 0ft	Total/NA	Solid	8015M/D	8702
885-8089-3	TP24-05 2ft	Total/NA	Solid	8015M/D	8702
885-8089-4	TP24-05 4ft	Total/NA	Solid	8015M/D	8702
885-8089-5	TP24-06 0ft	Total/NA	Solid	8015M/D	8702
885-8089-6	TP24-06 2ft	Total/NA	Solid	8015M/D	8702
885-8089-7	TP24-06 4ft	Total/NA	Solid	8015M/D	8702
885-8089-8	TP24-07 0ft	Total/NA	Solid	8015M/D	8702
MB 885-8702/1-A	Method Blank	Total/NA	Solid	8015M/D	8702
LCS 885-8702/2-A	Lab Control Sample	Total/NA	Solid	8015M/D	8702

Prep Batch: 8772

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-8089-11	TP24-08 4ft	Total/NA	Solid	SHAKE	

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QC Association Summary

Client: Vertex
Project/Site: Endurance Lariat Water Line

Job ID: 885-8089-1

GC Semi VOA (Continued)

Prep Batch: 8772 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-8089-12	TP24-08 12ft	Total/NA	Solid	SHAKE	
885-8089-13	TP24-09 0ft	Total/NA	Solid	SHAKE	
885-8089-14	TP24-09 6ft	Total/NA	Solid	SHAKE	
885-8089-15	TP24-09 12ft	Total/NA	Solid	SHAKE	
MB 885-8772/1-A	Method Blank	Total/NA	Solid	SHAKE	
LCS 885-8772/2-A	Lab Control Sample	Total/NA	Solid	SHAKE	

Analysis Batch: 8775

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-8089-11	TP24-08 4ft	Total/NA	Solid	8015M/D	8772
885-8089-12	TP24-08 12ft	Total/NA	Solid	8015M/D	8772
885-8089-13	TP24-09 0ft	Total/NA	Solid	8015M/D	8772
885-8089-14	TP24-09 6ft	Total/NA	Solid	8015M/D	8772
885-8089-15	TP24-09 12ft	Total/NA	Solid	8015M/D	8772
MB 885-8772/1-A	Method Blank	Total/NA	Solid	8015M/D	8772
LCS 885-8772/2-A	Lab Control Sample	Total/NA	Solid	8015M/D	8772

Analysis Batch: 8875

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-8089-9	TP24-07 2ft	Total/NA	Solid	8015M/D	8702
885-8089-10	TP24-07 4ft	Total/NA	Solid	8015M/D	8702

HPLC/IC

Prep Batch: 8739

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-8089-1	TP24-04 4ft	Total/NA	Solid	300_Prep	
885-8089-2	TP24-05 0ft	Total/NA	Solid	300_Prep	
885-8089-3	TP24-05 2ft	Total/NA	Solid	300_Prep	
885-8089-4	TP24-05 4ft	Total/NA	Solid	300_Prep	
885-8089-5	TP24-06 0ft	Total/NA	Solid	300_Prep	
885-8089-6	TP24-06 2ft	Total/NA	Solid	300_Prep	
885-8089-7	TP24-06 4ft	Total/NA	Solid	300_Prep	
885-8089-8	TP24-07 0ft	Total/NA	Solid	300_Prep	
885-8089-9	TP24-07 2ft	Total/NA	Solid	300_Prep	
885-8089-10	TP24-07 4ft	Total/NA	Solid	300_Prep	
MB 885-8739/1-A	Method Blank	Total/NA	Solid	300_Prep	
LCS 885-8739/2-A	Lab Control Sample	Total/NA	Solid	300_Prep	
885-8089-9 MS	TP24-07 2ft	Total/NA	Solid	300_Prep	
885-8089-9 MSD	TP24-07 2ft	Total/NA	Solid	300_Prep	
885-8089-10 MS	TP24-07 4ft	Total/NA	Solid	300_Prep	
885-8089-10 MSD	TP24-07 4ft	Total/NA	Solid	300_Prep	

Prep Batch: 8800

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-8089-11	TP24-08 4ft	Total/NA	Solid	300_Prep	
885-8089-12	TP24-08 12ft	Total/NA	Solid	300_Prep	
885-8089-13	TP24-09 0ft	Total/NA	Solid	300_Prep	
885-8089-14	TP24-09 6ft	Total/NA	Solid	300_Prep	
885-8089-15	TP24-09 12ft	Total/NA	Solid	300_Prep	
MB 885-8800/1-A	Method Blank	Total/NA	Solid	300_Prep	

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QC Association Summary

Client: Vertex

Job ID: 885-8089-1

Project/Site: Endurance Lariat Water Line

HPLC/IC (Continued)

Prep Batch: 8800 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 885-8800/2-A	Lab Control Sample	Total/NA	Solid	300_Prep	

Analysis Batch: 8813

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-8089-2	TP24-05 0ft	Total/NA	Solid	300.0	8739
885-8089-3	TP24-05 2ft	Total/NA	Solid	300.0	8739
885-8089-4	TP24-05 4ft	Total/NA	Solid	300.0	8739
885-8089-5	TP24-06 0ft	Total/NA	Solid	300.0	8739
885-8089-6	TP24-06 2ft	Total/NA	Solid	300.0	8739
885-8089-7	TP24-06 4ft	Total/NA	Solid	300.0	8739
885-8089-8	TP24-07 0ft	Total/NA	Solid	300.0	8739
885-8089-9	TP24-07 2ft	Total/NA	Solid	300.0	8739
885-8089-10	TP24-07 4ft	Total/NA	Solid	300.0	8739
MB 885-8739/1-A	Method Blank	Total/NA	Solid	300.0	8739
LCS 885-8739/2-A	Lab Control Sample	Total/NA	Solid	300.0	8739
885-8089-9 MS	TP24-07 2ft	Total/NA	Solid	300.0	8739
885-8089-9 MSD	TP24-07 2ft	Total/NA	Solid	300.0	8739
885-8089-10 MS	TP24-07 4ft	Total/NA	Solid	300.0	8739
885-8089-10 MSD	TP24-07 4ft	Total/NA	Solid	300.0	8739

Analysis Batch: 8833

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-8089-12	TP24-08 12ft	Total/NA	Solid	300.0	8800
885-8089-13	TP24-09 0ft	Total/NA	Solid	300.0	8800
885-8089-15	TP24-09 12ft	Total/NA	Solid	300.0	8800
MB 885-8800/1-A	Method Blank	Total/NA	Solid	300.0	8800
LCS 885-8800/2-A	Lab Control Sample	Total/NA	Solid	300.0	8800

Analysis Batch: 8838

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-8089-1	TP24-04 4ft	Total/NA	Solid	300.0	8739
885-8089-11	TP24-08 4ft	Total/NA	Solid	300.0	8800
885-8089-14	TP24-09 6ft	Total/NA	Solid	300.0	8800
MB 885-8838/10	Method Blank	Total/NA	Solid	300.0	
MRL 885-8838/9	Lab Control Sample	Total/NA	Solid	300.0	

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Lab Chronicle

Client: Vertex
Project/Site: Endurance Lariat Water Line

Job ID: 885-8089-1

Client Sample ID: TP24-04 4ft
Date Collected: 07/15/24 09:00
Date Received: 07/17/24 07:18

Lab Sample ID: 885-8089-1
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			8633	AT	EET ALB	07/18/24 08:44
Total/NA	Analysis	8015M/D		1	8807	JP	EET ALB	07/20/24 19:16
Total/NA	Prep	5030C			8633	AT	EET ALB	07/18/24 08:44
Total/NA	Analysis	8021B		1	8808	JP	EET ALB	07/20/24 19:16
Total/NA	Prep	SHAKE			8702	KR	EET ALB	07/18/24 14:33
Total/NA	Analysis	8015M/D		1	8751	DH	EET ALB	07/20/24 04:38
Total/NA	Prep	300_Prep			8739	JT	EET ALB	07/19/24 07:51
Total/NA	Analysis	300.0		50	8838	JT	EET ALB	07/21/24 02:43

Client Sample ID: TP24-05 0ft
Date Collected: 07/15/24 09:30
Date Received: 07/17/24 07:18

Lab Sample ID: 885-8089-2
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			8633	AT	EET ALB	07/18/24 08:44
Total/NA	Analysis	8015M/D		1	8807	JP	EET ALB	07/20/24 19:40
Total/NA	Prep	5030C			8633	AT	EET ALB	07/18/24 08:44
Total/NA	Analysis	8021B		1	8808	JP	EET ALB	07/20/24 19:40
Total/NA	Prep	SHAKE			8702	KR	EET ALB	07/18/24 14:33
Total/NA	Analysis	8015M/D		1	8751	DH	EET ALB	07/20/24 04:50
Total/NA	Prep	300_Prep			8739	JT	EET ALB	07/19/24 07:51
Total/NA	Analysis	300.0		20	8813	RC	EET ALB	07/19/24 09:46

Client Sample ID: TP24-05 2ft
Date Collected: 07/15/24 09:45
Date Received: 07/17/24 07:18

Lab Sample ID: 885-8089-3
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			8633	AT	EET ALB	07/18/24 08:44
Total/NA	Analysis	8015M/D		1	8807	JP	EET ALB	07/20/24 20:03
Total/NA	Prep	5030C			8633	AT	EET ALB	07/18/24 08:44
Total/NA	Analysis	8021B		1	8808	JP	EET ALB	07/20/24 20:03
Total/NA	Prep	SHAKE			8702	KR	EET ALB	07/18/24 14:33
Total/NA	Analysis	8015M/D		1	8751	DH	EET ALB	07/20/24 05:01
Total/NA	Prep	300_Prep			8739	JT	EET ALB	07/19/24 07:51
Total/NA	Analysis	300.0		20	8813	RC	EET ALB	07/19/24 10:01

Client Sample ID: TP24-05 4ft
Date Collected: 07/15/24 10:00
Date Received: 07/17/24 07:18

Lab Sample ID: 885-8089-4
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			8633	AT	EET ALB	07/18/24 08:44
Total/NA	Analysis	8015M/D		1	8807	JP	EET ALB	07/20/24 21:14

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Lab Chronicle

Client: Vertex
Project/Site: Endurance Lariat Water Line

Job ID: 885-8089-1

Client Sample ID: TP24-05 4ft
Date Collected: 07/15/24 10:00
Date Received: 07/17/24 07:18

Lab Sample ID: 885-8089-4
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			8633	AT	EET ALB	07/18/24 08:44
Total/NA	Analysis	8021B		1	8808	JP	EET ALB	07/20/24 21:14
Total/NA	Prep	SHAKE			8702	KR	EET ALB	07/18/24 14:33
Total/NA	Analysis	8015M/D		1	8751	DH	EET ALB	07/20/24 05:23
Total/NA	Prep	300_Prep			8739	JT	EET ALB	07/19/24 07:51
Total/NA	Analysis	300.0		20	8813	RC	EET ALB	07/19/24 10:16

Client Sample ID: TP24-06 0ft
Date Collected: 07/15/24 10:15
Date Received: 07/17/24 07:18

Lab Sample ID: 885-8089-5
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			8633	AT	EET ALB	07/18/24 08:44
Total/NA	Analysis	8015M/D		1	8807	JP	EET ALB	07/20/24 21:37
Total/NA	Prep	5030C			8633	AT	EET ALB	07/18/24 08:44
Total/NA	Analysis	8021B		1	8808	JP	EET ALB	07/20/24 21:37
Total/NA	Prep	SHAKE			8702	KR	EET ALB	07/18/24 14:33
Total/NA	Analysis	8015M/D		1	8751	DH	EET ALB	07/20/24 05:34
Total/NA	Prep	300_Prep			8739	JT	EET ALB	07/19/24 07:51
Total/NA	Analysis	300.0		20	8813	RC	EET ALB	07/19/24 10:31

Client Sample ID: TP24-06 2ft
Date Collected: 07/15/24 10:30
Date Received: 07/17/24 07:18

Lab Sample ID: 885-8089-6
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			8633	AT	EET ALB	07/18/24 08:44
Total/NA	Analysis	8015M/D		1	8807	JP	EET ALB	07/20/24 22:01
Total/NA	Prep	5030C			8633	AT	EET ALB	07/18/24 08:44
Total/NA	Analysis	8021B		1	8808	JP	EET ALB	07/20/24 22:01
Total/NA	Prep	SHAKE			8702	KR	EET ALB	07/18/24 14:33
Total/NA	Analysis	8015M/D		1	8751	DH	EET ALB	07/20/24 05:46
Total/NA	Prep	300_Prep			8739	JT	EET ALB	07/19/24 07:51
Total/NA	Analysis	300.0		20	8813	RC	EET ALB	07/19/24 12:37

Client Sample ID: TP24-06 4ft
Date Collected: 07/15/24 10:45
Date Received: 07/17/24 07:18

Lab Sample ID: 885-8089-7
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			8633	AT	EET ALB	07/18/24 08:44
Total/NA	Analysis	8015M/D		1	8807	JP	EET ALB	07/20/24 22:24
Total/NA	Prep	5030C			8633	AT	EET ALB	07/18/24 08:44
Total/NA	Analysis	8021B		1	8808	JP	EET ALB	07/20/24 22:24

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Lab Chronicle

Client: Vertex
Project/Site: Endurance Lariat Water Line

Job ID: 885-8089-1

Client Sample ID: TP24-06 4ft
Date Collected: 07/15/24 10:45
Date Received: 07/17/24 07:18

Lab Sample ID: 885-8089-7
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	SHAKE			8702	KR	EET ALB	07/18/24 14:33
Total/NA	Analysis	8015M/D		1	8751	DH	EET ALB	07/20/24 05:57
Total/NA	Prep	300_Prep			8739	JT	EET ALB	07/19/24 07:51
Total/NA	Analysis	300.0		20	8813	RC	EET ALB	07/19/24 12:52

Client Sample ID: TP24-07 0ft
Date Collected: 07/15/24 11:00
Date Received: 07/17/24 07:18

Lab Sample ID: 885-8089-8
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			8633	AT	EET ALB	07/18/24 08:44
Total/NA	Analysis	8015M/D		1	8807	JP	EET ALB	07/20/24 22:48
Total/NA	Prep	5030C			8633	AT	EET ALB	07/18/24 08:44
Total/NA	Analysis	8021B		1	8808	JP	EET ALB	07/20/24 22:48
Total/NA	Prep	SHAKE			8702	KR	EET ALB	07/18/24 14:33
Total/NA	Analysis	8015M/D		1	8751	DH	EET ALB	07/20/24 06:08
Total/NA	Prep	300_Prep			8739	JT	EET ALB	07/19/24 07:51
Total/NA	Analysis	300.0		20	8813	RC	EET ALB	07/19/24 13:07

Client Sample ID: TP24-07 2ft
Date Collected: 07/15/24 11:10
Date Received: 07/17/24 07:18

Lab Sample ID: 885-8089-9
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			8633	AT	EET ALB	07/18/24 08:44
Total/NA	Analysis	8015M/D		1	8807	JP	EET ALB	07/20/24 23:11
Total/NA	Prep	5030C			8633	AT	EET ALB	07/18/24 08:44
Total/NA	Analysis	8021B		1	8808	JP	EET ALB	07/20/24 23:11
Total/NA	Prep	SHAKE			8702	KR	EET ALB	07/18/24 14:33
Total/NA	Analysis	8015M/D		1	8875	KR	EET ALB	07/22/24 19:26
Total/NA	Prep	300_Prep			8739	JT	EET ALB	07/19/24 07:51
Total/NA	Analysis	300.0		20	8813	RC	EET ALB	07/19/24 13:22

Client Sample ID: TP24-07 4ft
Date Collected: 07/15/24 11:20
Date Received: 07/17/24 07:18

Lab Sample ID: 885-8089-10
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			8633	AT	EET ALB	07/18/24 08:44
Total/NA	Analysis	8015M/D		1	8807	JP	EET ALB	07/20/24 23:35
Total/NA	Prep	5030C			8633	AT	EET ALB	07/18/24 08:44
Total/NA	Analysis	8021B		1	8808	JP	EET ALB	07/20/24 23:35
Total/NA	Prep	SHAKE			8702	KR	EET ALB	07/18/24 14:33
Total/NA	Analysis	8015M/D		5	8875	KR	EET ALB	07/22/24 19:49

Eurofins Albuquerque

Lab Chronicle

Client: Vertex
Project/Site: Endurance Lariat Water Line

Job ID: 885-8089-1

Client Sample ID: TP24-07 4ft
Date Collected: 07/15/24 11:20
Date Received: 07/17/24 07:18

Lab Sample ID: 885-8089-10
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	300_Prep			8739	JT	EET ALB	07/19/24 07:51
Total/NA	Analysis	300.0		20	8813	RC	EET ALB	07/19/24 14:38

Client Sample ID: TP24-08 4ft
Date Collected: 07/15/24 11:45
Date Received: 07/17/24 07:18

Lab Sample ID: 885-8089-11
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			8646	AT	EET ALB	07/18/24 10:38
Total/NA	Analysis	8015M/D		5	8807	JP	EET ALB	07/20/24 07:09
Total/NA	Prep	5030C			8646	AT	EET ALB	07/18/24 10:38
Total/NA	Analysis	8021B		5	8808	JP	EET ALB	07/20/24 07:09
Total/NA	Prep	SHAKE			8772	KR	EET ALB	07/19/24 10:36
Total/NA	Analysis	8015M/D		10	8775	PD	EET ALB	07/19/24 22:16
Total/NA	Prep	300_Prep			8800	RC	EET ALB	07/19/24 13:21
Total/NA	Analysis	300.0		50	8838	JT	EET ALB	07/21/24 02:55

Client Sample ID: TP24-08 12ft
Date Collected: 07/15/24 14:00
Date Received: 07/17/24 07:18

Lab Sample ID: 885-8089-12
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			8646	AT	EET ALB	07/18/24 10:38
Total/NA	Analysis	8015M/D		1	8807	JP	EET ALB	07/20/24 07:32
Total/NA	Prep	5030C			8646	AT	EET ALB	07/18/24 10:38
Total/NA	Analysis	8021B		1	8808	JP	EET ALB	07/20/24 07:32
Total/NA	Prep	SHAKE			8772	KR	EET ALB	07/19/24 10:36
Total/NA	Analysis	8015M/D		1	8775	PD	EET ALB	07/19/24 22:30
Total/NA	Prep	300_Prep			8800	RC	EET ALB	07/19/24 13:21
Total/NA	Analysis	300.0		20	8833	RC	EET ALB	07/19/24 15:38

Client Sample ID: TP24-09 0ft
Date Collected: 07/15/24 16:00
Date Received: 07/17/24 07:18

Lab Sample ID: 885-8089-13
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			8646	AT	EET ALB	07/18/24 10:38
Total/NA	Analysis	8015M/D		1	8807	JP	EET ALB	07/20/24 07:56
Total/NA	Prep	5030C			8646	AT	EET ALB	07/18/24 10:38
Total/NA	Analysis	8021B		1	8808	JP	EET ALB	07/20/24 07:56
Total/NA	Prep	SHAKE			8772	KR	EET ALB	07/19/24 10:36
Total/NA	Analysis	8015M/D		1	8775	PD	EET ALB	07/19/24 22:43
Total/NA	Prep	300_Prep			8800	RC	EET ALB	07/19/24 13:21
Total/NA	Analysis	300.0		20	8833	RC	EET ALB	07/19/24 16:42

Eurofins Albuquerque

Lab Chronicle

Client: Vertex
Project/Site: Endurance Lariat Water Line

Job ID: 885-8089-1

Client Sample ID: TP24-09 6ft
Date Collected: 07/15/24 16:30
Date Received: 07/17/24 07:18

Lab Sample ID: 885-8089-14
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			8646	AT	EET ALB	07/18/24 10:38
Total/NA	Analysis	8015M/D		5	8807	JP	EET ALB	07/20/24 08:19
Total/NA	Prep	5030C			8646	AT	EET ALB	07/18/24 10:38
Total/NA	Analysis	8021B		5	8808	JP	EET ALB	07/20/24 08:19
Total/NA	Prep	SHAKE			8772	KR	EET ALB	07/19/24 10:36
Total/NA	Analysis	8015M/D		10	8775	PD	EET ALB	07/19/24 22:57
Total/NA	Prep	300_Prep			8800	RC	EET ALB	07/19/24 13:21
Total/NA	Analysis	300.0		100	8838	JT	EET ALB	07/21/24 03:32

Client Sample ID: TP24-09 12ft
Date Collected: 07/15/24 17:00
Date Received: 07/17/24 07:18

Lab Sample ID: 885-8089-15
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			8646	AT	EET ALB	07/18/24 10:38
Total/NA	Analysis	8015M/D		1	8807	JP	EET ALB	07/20/24 09:29
Total/NA	Prep	5030C			8646	AT	EET ALB	07/18/24 10:38
Total/NA	Analysis	8021B		1	8808	JP	EET ALB	07/20/24 09:29
Total/NA	Prep	SHAKE			8772	KR	EET ALB	07/19/24 10:36
Total/NA	Analysis	8015M/D		1	8775	PD	EET ALB	07/19/24 23:24
Total/NA	Prep	300_Prep			8800	RC	EET ALB	07/19/24 13:21
Total/NA	Analysis	300.0		20	8833	RC	EET ALB	07/19/24 17:34

Laboratory References:
EET ALB = Eurofins Albuquerque, 4901 Hawkins NE, Albuquerque, NM 87109, TEL (505)345-3975

Accreditation/Certification Summary

Client: Vertex
Project/Site: Endurance Lariat Water Line

Job ID: 885-8089-1

Laboratory: Eurofins Albuquerque

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
New Mexico	State	NM9425, NM0901	02-26-25
The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.			
Analysis Method	Prep Method	Matrix	Analyte
300.0	300_Prep	Solid	Chloride
8015M/D	5030C	Solid	Gasoline Range Organics [C6 - C10]
8015M/D	SHAKE	Solid	Diesel Range Organics [C10-C28]
8015M/D	SHAKE	Solid	Motor Oil Range Organics [C28-C40]
8021B	5030C	Solid	Benzene
8021B	5030C	Solid	Ethylbenzene
8021B	5030C	Solid	Toluene
8021B	5030C	Solid	Xylenes, Total
Oregon	NELAP	NM100001	02-26-25

Chain-of-Custody Record

Client: Vertex(Solaris Midstream Water Company)

Mailing Address: On File

Phone #: On File

email or Fax#: Cdixon@vertexresource.com

QA/QC Package:

☐ Standard☐ Level 4 (Full Validation)Accreditation: ☐ Az Compliance☐ NELAC ☐ Other☐ EDD (Type)

Project Manager: Chance Dixon

Sampler: Wyatt Wadleigh

On Ice: ☒ Yes ☐ No *Yes*# of Coolers: *1*Cooler Temp (including CF): *0.8 ± 0.8 °C*

Container Type and #

Preservative Type

HEAL No.

Sample Name

Date

Time

Matrix

Soil

TP24-04 4ft

TP24-05 0ft

TP24-05 2ft

TP24-05 4ft

TP24-06 0ft

TP24-06 2ft

TP24-06 4ft

TP24-07 0ft

TP24-07 2ft

TP24-07 4ft

TP24-08 4ft

TP24-08 12ft

TP24-04 4ft

TP24-05 0ft

TP24-05 2ft

TP24-05 4ft

TP24-06 0ft

TP24-06 2ft

TP24-06 4ft

TP24-07 0ft

TP24-07 2ft

TP24-07 4ft

TP24-08 4ft

TP24-08 12ft

TP24-04 4ft

TP24-05 0ft

TP24-05 2ft

TP24-05 4ft

TP24-06 0ft

TP24-06 2ft

TP24-06 4ft

TP24-07 0ft

TP24-07 2ft

TP24-07 4ft

TP24-08 4ft

TP24-08 12ft

TP24-04 4ft

TP24-05 0ft

TP24-05 2ft

TP24-05 4ft

TP24-06 0ft

TP24-06 2ft

TP24-06 4ft

TP24-07 0ft

TP24-07 2ft

TP24-07 4ft

TP24-08 4ft

TP24-08 12ft

TP24-04 4ft

TP24-05 0ft

TP24-05 2ft

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TP24-06 0ft

TP24-06 2ft

TP24-06 4ft

TP24-07 0ft

TP24-07 2ft

TP24-07 4ft

TP24-08 4ft

TP24-08 12ft

TP24-04 4ft

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TP24-04 4ft

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TP24-08 4ft

TP24-08 12ft

TP24-04 4ft

TP24-05 0ft

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TP24-06 0ft

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TP24-07 0ft

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TP24-08 4ft

TP24-08 12ft

TP24-04 4ft

TP24-05 0ft

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TP24-06 4ft

TP24-07 0ft

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TP24-08 12ft

TP24-04 4ft

TP24-05 0ft

TP24-05 2ft

TP24-05 4ft

TP24-06 0ft

TP24-06 2ft

TP24-06 4ft

TP24-07 0ft

TP24-07 2ft

TP24-07 4ft

TP24-08 4ft

TP24-08 12ft

TP24-04 4ft

TP24-05 0ft

TP24-05 2ft

TP24-05 4ft

TP24-06 0ft

TP24-06 2ft

TP24-06 4ft

TP24-07 0ft

TP24-07 2ft

TP24-07 4ft

TP24-08 4ft

TP24-08 12ft

TP24-04 4ft

TP24-05 0ft

TP24-05 2ft

TP24-05 4ft

TP24-06 0ft

TP24-06 2ft

TP24-06 4ft

TP24-07 0ft

TP24-07 2ft

TP24-07 4ft

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TP24-08 12ft

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TP24-07 0ft

TP24-07 2ft

TP24-07 4ft

TP24-08 4ft

TP24-08 12ft

TP24-04 4ft

TP24-05 0ft

TP24-05 2ft

TP24-05 4ft

TP24-06 0ft

TP24-06 2ft

TP24-06 4ft

TP24-07 0ft

TP24-07 2ft

TP24-07 4ft

TP24-08 4ft

TP24-08 12ft

TP24-04 4ft

TP24-05 0ft

TP24-05 2ft

Login Sample Receipt Checklist

Client: Vertex

Job Number: 885-8089-1

Login Number: 8089

List Source: Eurofins Albuquerque

List Number: 1

Creator: Casarrubias, Tracy

Question	Answer	Comment
Radioactivity wasn't checked or is <= background as measured by a survey meter.	True	
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.	False	IDs on containers do not match the COC. Logged in per COC.
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").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	



Environment Testing

- 1
- 2
- 3
- 4
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- 6
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- 10
- 11

ANALYTICAL REPORT

PREPARED FOR

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

Generated 8/13/2024 4:33:49 PM

JOB DESCRIPTION

Endurance Lariat Water Line

JOB NUMBER

885-9568-1

Eurofins Albuquerque
4901 Hawkins NE
Albuquerque NM 87109

Eurofins Albuquerque

Job Notes

The test results in this report relate only to the samples as received by the laboratory and will meet all requirements of the methodology, with any exceptions noted. This report shall not be reproduced except in full, without the express written approval of the laboratory. All questions should be directed to the Eurofins Environment Testing South Central, LLC Project Manager.

Authorization



Authorized for release by
Cheyenne Cason, Project Manager
cheyenne.cason@et.eurofinsus.com
(505)345-3975

Generated
8/13/2024 4:33:49 PM

Client: Vertex
Project/Site: Endurance Lariat Water Line

Laboratory Job ID: 885-9568-1

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Definitions/Glossary

Client: Vertex
Project/Site: Endurance Lariat Water Line

Job ID: 885-9568-1

Glossary

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

Case Narrative

Client: Vertex
Project: Endurance Lariat Water Line

Job ID: 885-9568-1

Job ID: 885-9568-1

Eurofins Albuquerque

Job Narrative 885-9568-1

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 and/or narrative comments are included to explain any exceptions, if applicable.

- Matrix QC may not be reported if insufficient sample is provided 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 8/9/2024 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 2.6°C.

Gasoline Range Organics

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

GC VOA

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

Diesel Range Organics

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.

Eurofins Albuquerque

Client Sample Results

Client: Vertex
Project/Site: Endurance Lariat Water Line

Job ID: 885-9568-1

Client Sample ID: TP24-07 6' Lab Sample ID: 885-9568-1
Date Collected: 08/07/24 14:50 Matrix: Solid
Date Received: 08/09/24 08:15

Method: SW846 8015D - Gasoline Range Organics (GRO) (GC)									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Gasoline Range Organics [C6 - C10]	ND		3.8	mg/Kg		08/09/24 12:17	08/09/24 18:19	1	
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac	
4-Bromofluorobenzene (Surr)	104		35 - 166			08/09/24 12:17	08/09/24 18:19	1	
Method: SW846 8021B - Volatile Organic Compounds (GC)									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Benzene	ND		0.019	mg/Kg		08/09/24 12:17	08/09/24 18:19	1	
Ethylbenzene	ND		0.038	mg/Kg		08/09/24 12:17	08/09/24 18:19	1	
Toluene	ND		0.038	mg/Kg		08/09/24 12:17	08/09/24 18:19	1	
Xylenes, Total	ND		0.075	mg/Kg		08/09/24 12:17	08/09/24 18:19	1	
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac	
4-Bromofluorobenzene (Surr)	94		48 - 145			08/09/24 12:17	08/09/24 18:19	1	
Method: SW846 8015D - Diesel Range Organics (DRO) (GC)									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Diesel Range Organics [C10-C28]	10		10	mg/Kg		08/09/24 14:57	08/12/24 11:58	1	
Motor Oil Range Organics [C28-C40]	ND		50	mg/Kg		08/09/24 14:57	08/12/24 11:58	1	
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac	
Di-n-octyl phthalate (Surr)	112		62 - 134			08/09/24 14:57	08/12/24 11:58	1	
Method: EPA 300.0 - Anions, Ion Chromatography									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Chloride	3500		150	mg/Kg		08/09/24 15:31	08/10/24 11:57	50	

Client Sample Results

Client: Vertex
Project/Site: Endurance Lariat Water Line

Job ID: 885-9568-1

Client Sample ID: TP24-07 8' Lab Sample ID: 885-9568-2
Date Collected: 08/07/24 15:00 Matrix: Solid
Date Received: 08/09/24 08:15

Method: SW846 8015D - Gasoline Range Organics (GRO) (GC)									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Gasoline Range Organics [C6 - C10]	ND		3.8	mg/Kg		08/09/24 12:17	08/09/24 18:43	1	
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac	
4-Bromofluorobenzene (Surr)	99		35 - 166			08/09/24 12:17	08/09/24 18:43	1	
Method: SW846 8021B - Volatile Organic Compounds (GC)									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Benzene	ND		0.019	mg/Kg		08/09/24 12:17	08/09/24 18:43	1	
Ethylbenzene	ND		0.038	mg/Kg		08/09/24 12:17	08/09/24 18:43	1	
Toluene	ND		0.038	mg/Kg		08/09/24 12:17	08/09/24 18:43	1	
Xylenes, Total	ND		0.077	mg/Kg		08/09/24 12:17	08/09/24 18:43	1	
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac	
4-Bromofluorobenzene (Surr)	89		48 - 145			08/09/24 12:17	08/09/24 18:43	1	
Method: SW846 8015D - Diesel Range Organics (DRO) (GC)									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Diesel Range Organics [C10-C28]	150		9.7	mg/Kg		08/09/24 14:57	08/12/24 12:11	1	
Motor Oil Range Organics [C28-C40]	110		48	mg/Kg		08/09/24 14:57	08/12/24 12:11	1	
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac	
Di-n-octyl phthalate (Surr)	110		62 - 134			08/09/24 14:57	08/12/24 12:11	1	
Method: EPA 300.0 - Anions, Ion Chromatography									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Chloride	1900		60	mg/Kg		08/09/24 15:31	08/09/24 20:23	20	

QC Sample Results

Client: Vertex

Job ID: 885-9568-1

Project/Site: Endurance Lariat Water Line

Method: 8015D - Gasoline Range Organics (GRO) (GC)

Lab Sample ID: MB 885-9980/1-A

Matrix: Solid

Analysis Batch: 10028

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 9980

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics [C6 - C10]	ND		5.0	mg/Kg		08/09/24 09:28	08/09/24 12:24	1
Surrogate	MB %Recovery	MB Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	94		35 - 166			08/09/24 09:28	08/09/24 12:24	1

Lab Sample ID: LCS 885-9980/2-A

Matrix: Solid

Analysis Batch: 10028

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 9980

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits	
Gasoline Range Organics [C6 - C10]	25.0	24.0		mg/Kg		96	70 - 130	
Surrogate	LCS %Recovery	LCS Qualifier	Limits					
4-Bromofluorobenzene (Surr)	197		35 - 166					

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 885-9980/1-A

Matrix: Solid

Analysis Batch: 10030

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 9980

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.025	mg/Kg		08/09/24 09:28	08/09/24 12:24	1
Ethylbenzene	ND		0.050	mg/Kg		08/09/24 09:28	08/09/24 12:24	1
Toluene	ND		0.050	mg/Kg		08/09/24 09:28	08/09/24 12:24	1
Xylenes, Total	ND		0.10	mg/Kg		08/09/24 09:28	08/09/24 12:24	1
Surrogate	MB %Recovery	MB Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	89		48 - 145			08/09/24 09:28	08/09/24 12:24	1

Lab Sample ID: LCS 885-9980/3-A

Matrix: Solid

Analysis Batch: 10030

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 9980

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits	
Benzene	1.00	0.887		mg/Kg		89	70 - 130	
Ethylbenzene	1.00	0.826		mg/Kg		83	70 - 130	
m&p-Xylene	2.00	1.68		mg/Kg		84	70 - 130	
o-Xylene	1.00	0.820		mg/Kg		82	70 - 130	
Toluene	1.00	0.833		mg/Kg		83	70 - 130	
Xylenes, Total	3.00	2.50		mg/Kg		83	70 - 130	
Surrogate	LCS %Recovery	LCS Qualifier	Limits					
4-Bromofluorobenzene (Surr)	92		48 - 145					

Eurofins Albuquerque

QC Sample Results

Client: Vertex
Project/Site: Endurance Lariat Water Line

Job ID: 885-9568-1

Method: 8015D - Diesel Range Organics (DRO) (GC)

Lab Sample ID: MB 885-10019/1-A						Client Sample ID: Method Blank			
Matrix: Solid						Prep Type: Total/NA			
Analysis Batch: 10076						Prep Batch: 10019			
Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Diesel Range Organics [C10-C28]	ND		10	mg/Kg		08/09/24 14:57	08/12/24 11:33	1	
Motor Oil Range Organics [C28-C40]	ND		50	mg/Kg		08/09/24 14:57	08/12/24 11:33	1	
Surrogate	MB %Recovery	MB Qualifier	Limits			Prepared	Analyzed	Dil Fac	
Di-n-octyl phthalate (Surr)	98		62 - 134			08/09/24 14:57	08/12/24 11:33	1	

Lab Sample ID: LCS 885-10019/2-A						Client Sample ID: Lab Control Sample			
Matrix: Solid						Prep Type: Total/NA			
Analysis Batch: 10076						Prep Batch: 10019			
Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Diesel Range Organics [C10-C28]			50.0	63.9		mg/Kg		128	60 - 135
Surrogate	LCS %Recovery	LCS Qualifier	Limits						
Di-n-octyl phthalate (Surr)	107		62 - 134						

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MRL 885-10043/6						Client Sample ID: Lab Control Sample			
Matrix: Solid						Prep Type: Total/NA			
Analysis Batch: 10043									
Analyte			Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
Chloride			0.500	0.529		mg/L		106	50 - 150

QC Association Summary

Client: Vertex

Project/Site: Endurance Lariat Water Line

Job ID: 885-9568-1

GC VOA

Prep Batch: 9980

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-9568-1	TP24-07 6'	Total/NA	Solid	5035	
885-9568-2	TP24-07 8'	Total/NA	Solid	5035	
MB 885-9980/1-A	Method Blank	Total/NA	Solid	5035	
LCS 885-9980/2-A	Lab Control Sample	Total/NA	Solid	5035	
LCS 885-9980/3-A	Lab Control Sample	Total/NA	Solid	5035	

Analysis Batch: 10028

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-9568-1	TP24-07 6'	Total/NA	Solid	8015D	9980
885-9568-2	TP24-07 8'	Total/NA	Solid	8015D	9980
MB 885-9980/1-A	Method Blank	Total/NA	Solid	8015D	9980
LCS 885-9980/2-A	Lab Control Sample	Total/NA	Solid	8015D	9980

Analysis Batch: 10030

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-9568-1	TP24-07 6'	Total/NA	Solid	8021B	9980
885-9568-2	TP24-07 8'	Total/NA	Solid	8021B	9980
MB 885-9980/1-A	Method Blank	Total/NA	Solid	8021B	9980
LCS 885-9980/3-A	Lab Control Sample	Total/NA	Solid	8021B	9980

GC Semi VOA

Prep Batch: 10019

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-9568-1	TP24-07 6'	Total/NA	Solid	SHAKE	
885-9568-2	TP24-07 8'	Total/NA	Solid	SHAKE	
MB 885-10019/1-A	Method Blank	Total/NA	Solid	SHAKE	
LCS 885-10019/2-A	Lab Control Sample	Total/NA	Solid	SHAKE	

Analysis Batch: 10076

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-9568-1	TP24-07 6'	Total/NA	Solid	8015D	10019
885-9568-2	TP24-07 8'	Total/NA	Solid	8015D	10019
MB 885-10019/1-A	Method Blank	Total/NA	Solid	8015D	10019
LCS 885-10019/2-A	Lab Control Sample	Total/NA	Solid	8015D	10019

HPLC/IC

Prep Batch: 9999

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-9568-1	TP24-07 6'	Total/NA	Solid	300_Prep	
885-9568-2	TP24-07 8'	Total/NA	Solid	300_Prep	

Analysis Batch: 10026

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-9568-2	TP24-07 8'	Total/NA	Solid	300.0	9999

Analysis Batch: 10043

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-9568-1	TP24-07 6'	Total/NA	Solid	300.0	9999
MRL 885-10043/6	Lab Control Sample	Total/NA	Solid	300.0	

Lab Chronicle

Client: Vertex
Project/Site: Endurance Lariat Water Line

Job ID: 885-9568-1

Client Sample ID: TP24-07 6'

Lab Sample ID: 885-9568-1

Date Collected: 08/07/24 14:50

Matrix: Solid

Date Received: 08/09/24 08:15

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5035			9980	AT	EET ALB	08/09/24 12:17
Total/NA	Analysis	8015D		1	10028	JP	EET ALB	08/09/24 18:19
Total/NA	Prep	5035			9980	AT	EET ALB	08/09/24 12:17
Total/NA	Analysis	8021B		1	10030	JP	EET ALB	08/09/24 18:19
Total/NA	Prep	SHAKE			10019	KR	EET ALB	08/09/24 14:57
Total/NA	Analysis	8015D		1	10076	KR	EET ALB	08/12/24 11:58
Total/NA	Prep	300_Prep			9999	EH	EET ALB	08/09/24 15:31
Total/NA	Analysis	300.0		50	10043	RC	EET ALB	08/10/24 11:57

Client Sample ID: TP24-07 8'

Lab Sample ID: 885-9568-2

Date Collected: 08/07/24 15:00

Matrix: Solid

Date Received: 08/09/24 08:15

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5035			9980	AT	EET ALB	08/09/24 12:17
Total/NA	Analysis	8015D		1	10028	JP	EET ALB	08/09/24 18:43
Total/NA	Prep	5035			9980	AT	EET ALB	08/09/24 12:17
Total/NA	Analysis	8021B		1	10030	JP	EET ALB	08/09/24 18:43
Total/NA	Prep	SHAKE			10019	KR	EET ALB	08/09/24 14:57
Total/NA	Analysis	8015D		1	10076	KR	EET ALB	08/12/24 12:11
Total/NA	Prep	300_Prep			9999	EH	EET ALB	08/09/24 15:31
Total/NA	Analysis	300.0		20	10026	RC	EET ALB	08/09/24 20:23

Laboratory References:
EET ALB = Eurofins Albuquerque, 4901 Hawkins NE, Albuquerque, NM 87109, TEL (505)345-3975

Accreditation/Certification Summary

Client: Vertex
Project/Site: Endurance Lariat Water Line

Job ID: 885-9568-1

Laboratory: Eurofins Albuquerque

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
New Mexico	State	NM9425, NM0901	02-26-25
The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.			
Analysis Method	Prep Method	Matrix	Analyte
300.0	300_Prep	Solid	Chloride
8015D	5035	Solid	Gasoline Range Organics [C6 - C10]
8015D	SHAKE	Solid	Diesel Range Organics [C10-C28]
8015D	SHAKE	Solid	Motor Oil Range Organics [C28-C40]
8021B	5035	Solid	Benzene
8021B	5035	Solid	Ethylbenzene
8021B	5035	Solid	Toluene
8021B	5035	Solid	Xylenes, Total
Oregon	NELAP	NM100001	02-26-25

Login Sample Receipt Checklist

Client: Vertex

Job Number: 885-9568-1

Login Number: 9568

List Source: Eurofins Albuquerque

List Number: 1

Creator: Casarrubias, Tracy

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
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.	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").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	



Environment Testing

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ANALYTICAL REPORT

PREPARED FOR

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

Generated 9/15/2024 6:48:23 PM

JOB DESCRIPTION

Endurance Lariat Line

JOB NUMBER

885-11064-1

Eurofins Albuquerque
4901 Hawkins NE
Albuquerque NM 87109

Eurofins Albuquerque

Job Notes

The test results in this report relate only to the samples as received by the laboratory and will meet all requirements of the methodology, with any exceptions noted. This report shall not be reproduced except in full, without the express written approval of the laboratory. All questions should be directed to the Eurofins Environment Testing South Central, LLC Project Manager.

Authorization



Authorized for release by
Cheyenne Cason, Project Manager
cheyenne.cason@et.eurofinsus.com
(505)345-3975

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Client: Vertex
Project/Site: Endurance Lariat Line

Laboratory Job ID: 885-11064-1



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Definitions/Glossary

Client: Vertex
Project/Site: Endurance Lariat Line

Job ID: 885-11064-1

Qualifiers

GC VOA

Qualifier	Qualifier Description
S1+	Surrogate recovery exceeds control limits, high biased.

GC Semi VOA

Qualifier	Qualifier Description
D	Surrogate or matrix spike recoveries were not obtained because the extract was diluted for analysis; also compounds analyzed at a dilution may be flagged with a D.
S1-	Surrogate recovery exceeds control limits, low biased.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	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: Endurance Lariat Line

Job ID: 885-11064-1

Job ID: 885-11064-1

Eurofins Albuquerque

Job Narrative 885-11064-1

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 and/or narrative comments are included to explain any exceptions, if applicable.

- Matrix QC may not be reported if insufficient sample is provided 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 9/4/2024 7:45 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 1.5°C.

Gasoline Range Organics

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

GC VOA

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

Diesel Range Organics

Method 8015D_DRO: The following sample was diluted due to the nature of the sample matrix: TP24-08 8' (885-11064-3). Elevated reporting limits (RLs) are provided.

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.

Eurofins Albuquerque

Client Sample Results

Client: Vertex
Project/Site: Endurance Lariat Line

Job ID: 885-11064-1

Client Sample ID: BH24-27-0'
Date Collected: 08/30/24 11:26
Date Received: 09/04/24 07:45

Lab Sample ID: 885-11064-1
Matrix: Solid

Method: SW846 8015M/D - Gasoline Range Organics (GRO) (GC)									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Gasoline Range Organics [C6 - C10]	ND		5.0	mg/Kg		09/04/24 17:14	09/09/24 21:30		1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac	
4-Bromofluorobenzene (Surr)	105		35 - 166			09/04/24 17:14	09/09/24 21:30		1
Method: SW846 8021B - Volatile Organic Compounds (GC)									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Benzene	ND		0.025	mg/Kg		09/04/24 17:14	09/09/24 21:30		1
Ethylbenzene	ND		0.050	mg/Kg		09/04/24 17:14	09/09/24 21:30		1
Toluene	ND		0.050	mg/Kg		09/04/24 17:14	09/09/24 21:30		1
Xylenes, Total	ND		0.10	mg/Kg		09/04/24 17:14	09/09/24 21:30		1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac	
4-Bromofluorobenzene (Surr)	103		48 - 145			09/04/24 17:14	09/09/24 21:30		1
Method: SW846 8015M/D - Diesel Range Organics (DRO) (GC)									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Diesel Range Organics [C10-C28]	14		9.8	mg/Kg		09/05/24 10:28	09/06/24 23:33		1
Motor Oil Range Organics [C28-C40]	ND		49	mg/Kg		09/05/24 10:28	09/06/24 23:33		1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac	
Di-n-octyl phthalate (Surr)	103		62 - 134			09/05/24 10:28	09/06/24 23:33		1
Method: EPA 300.0 - Anions, Ion Chromatography									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Chloride	ND		60	mg/Kg		09/05/24 12:27	09/05/24 20:19		20

Client Sample Results

Client: Vertex
Project/Site: Endurance Lariat Line

Job ID: 885-11064-1

Client Sample ID: BH24-27-2'

Lab Sample ID: 885-11064-2

Date Collected: 08/30/24 11:31

Matrix: Solid

Date Received: 09/04/24 07:45

Method: SW846 8015M/D - Gasoline Range Organics (GRO) (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics [C6 - C10]	ND		5.0	mg/Kg		09/04/24 17:14	09/09/24 22:35	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	113		35 - 166			09/04/24 17:14	09/09/24 22:35	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.025	mg/Kg		09/04/24 17:14	09/09/24 22:35	1
Ethylbenzene	ND		0.050	mg/Kg		09/04/24 17:14	09/09/24 22:35	1
Toluene	ND		0.050	mg/Kg		09/04/24 17:14	09/09/24 22:35	1
Xylenes, Total	ND		0.10	mg/Kg		09/04/24 17:14	09/09/24 22:35	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	103		48 - 145			09/04/24 17:14	09/09/24 22:35	1

Method: SW846 8015M/D - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	150		8.7	mg/Kg		09/05/24 10:28	09/06/24 23:58	1
Motor Oil Range Organics [C28-C40]	82		43	mg/Kg		09/05/24 10:28	09/06/24 23:58	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
Di-n-octyl phthalate (Surr)	103		62 - 134			09/05/24 10:28	09/06/24 23:58	1

Method: EPA 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	85		60	mg/Kg		09/05/24 12:27	09/05/24 20:32	20

Client Sample Results

Client: Vertex
Project/Site: Endurance Lariat Line

Job ID: 885-11064-1

Client Sample ID: TP24-08 8'

Lab Sample ID: 885-11064-3

Date Collected: 08/30/24 12:18

Matrix: Solid

Date Received: 09/04/24 07:45

Method: SW846 8015M/D - Gasoline Range Organics (GRO) (GC)									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Gasoline Range Organics [C6 - C10]	300		4.8	mg/Kg		09/04/24 17:14	09/09/24 23:40	1	
Surrogate						Prepared	Analyzed	Dil Fac	
4-Bromofluorobenzene (Surr)	664	S1+	35 - 166			09/04/24 17:14	09/09/24 23:40	1	
Method: SW846 8021B - Volatile Organic Compounds (GC)									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Benzene	0.037		0.024	mg/Kg		09/04/24 17:14	09/09/24 23:40	1	
Ethylbenzene	0.61		0.048	mg/Kg		09/04/24 17:14	09/09/24 23:40	1	
Toluene	0.11		0.048	mg/Kg		09/04/24 17:14	09/09/24 23:40	1	
Xylenes, Total	15		0.96	mg/Kg		09/04/24 17:14	09/10/24 13:45	10	
Surrogate						Prepared	Analyzed	Dil Fac	
4-Bromofluorobenzene (Surr)	283	S1+	48 - 145			09/04/24 17:14	09/09/24 23:40	1	
Method: SW846 8015M/D - Diesel Range Organics (DRO) (GC)									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Diesel Range Organics [C10-C28]	56000		910	mg/Kg		09/05/24 10:28	09/07/24 00:23	100	
Motor Oil Range Organics [C28-C40]	26000		4600	mg/Kg		09/05/24 10:28	09/07/24 00:23	100	
Surrogate						Prepared	Analyzed	Dil Fac	
Di-n-octyl phthalate (Surr)	0	S1- D	62 - 134			09/05/24 10:28	09/07/24 00:23	100	
Method: EPA 300.0 - Anions, Ion Chromatography									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Chloride	4500		150	mg/Kg		09/05/24 12:27	09/06/24 19:16	50	

Client Sample Results

Client: Vertex
Project/Site: Endurance Lariat Line

Job ID: 885-11064-1

Client Sample ID: BH24-28 0' Lab Sample ID: 885-11064-4
Date Collected: 08/30/24 12:25 Matrix: Solid
Date Received: 09/04/24 07:45

Method: SW846 8015M/D - Gasoline Range Organics (GRO) (GC)									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Gasoline Range Organics [C6 - C10]	ND		4.8	mg/Kg		09/04/24 17:14	09/10/24 14:51	1	
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac	
4-Bromofluorobenzene (Surr)	112		35 - 166			09/04/24 17:14	09/10/24 14:51	1	
Method: SW846 8021B - Volatile Organic Compounds (GC)									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Benzene	ND		0.024	mg/Kg		09/04/24 17:14	09/10/24 00:02	1	
Ethylbenzene	ND		0.048	mg/Kg		09/04/24 17:14	09/10/24 00:02	1	
Toluene	ND		0.048	mg/Kg		09/04/24 17:14	09/10/24 00:02	1	
Xylenes, Total	ND		0.097	mg/Kg		09/04/24 17:14	09/10/24 00:02	1	
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac	
4-Bromofluorobenzene (Surr)	118		48 - 145			09/04/24 17:14	09/10/24 00:02	1	
Method: SW846 8015M/D - Diesel Range Organics (DRO) (GC)									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Diesel Range Organics [C10-C28]	400		8.9	mg/Kg		09/05/24 10:28	09/10/24 16:05	1	
Motor Oil Range Organics [C28-C40]	330		44	mg/Kg		09/05/24 10:28	09/10/24 16:05	1	
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac	
Di-n-octyl phthalate (Surr)	116		62 - 134			09/05/24 10:28	09/10/24 16:05	1	
Method: EPA 300.0 - Anions, Ion Chromatography									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Chloride	2900		150	mg/Kg		09/05/24 12:27	09/06/24 19:31	50	

Client Sample Results

Client: Vertex
Project/Site: Endurance Lariat Line

Job ID: 885-11064-1

Client Sample ID: BH24-28 2'
Date Collected: 08/30/24 12:29
Date Received: 09/04/24 07:45

Lab Sample ID: 885-11064-5
Matrix: Solid

Method: SW846 8015M/D - Gasoline Range Organics (GRO) (GC)									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Gasoline Range Organics [C6 - C10]	ND		4.9	mg/Kg		09/04/24 17:14	09/10/24 00:24	1	
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac	
4-Bromofluorobenzene (Surr)	124		35 - 166			09/04/24 17:14	09/10/24 00:24	1	
Method: SW846 8021B - Volatile Organic Compounds (GC)									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Benzene	ND		0.025	mg/Kg		09/04/24 17:14	09/10/24 00:24	1	
Ethylbenzene	ND		0.049	mg/Kg		09/04/24 17:14	09/10/24 00:24	1	
Toluene	ND		0.049	mg/Kg		09/04/24 17:14	09/10/24 00:24	1	
Xylenes, Total	ND		0.099	mg/Kg		09/04/24 17:14	09/10/24 00:24	1	
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac	
4-Bromofluorobenzene (Surr)	109		48 - 145			09/04/24 17:14	09/10/24 00:24	1	
Method: SW846 8015M/D - Diesel Range Organics (DRO) (GC)									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Diesel Range Organics [C10-C28]	25		8.7	mg/Kg		09/05/24 10:28	09/07/24 01:12	1	
Motor Oil Range Organics [C28-C40]	ND		44	mg/Kg		09/05/24 10:28	09/07/24 01:12	1	
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac	
Di-n-octyl phthalate (Surr)	107		62 - 134			09/05/24 10:28	09/07/24 01:12	1	
Method: EPA 300.0 - Anions, Ion Chromatography									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Chloride	420		60	mg/Kg		09/05/24 12:27	09/05/24 22:02	20	

Client Sample Results

Client: Vertex
Project/Site: Endurance Lariat Line

Job ID: 885-11064-1

Client Sample ID: BH24-28 4'
Date Collected: 08/30/24 12:32
Date Received: 09/04/24 07:45

Lab Sample ID: 885-11064-6
Matrix: Solid

Method: SW846 8015M/D - Gasoline Range Organics (GRO) (GC)									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Gasoline Range Organics [C6 - C10]	ND		4.9	mg/Kg		09/04/24 17:14	09/10/24 00:45	1	
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac	
4-Bromofluorobenzene (Surr)	103		35 - 166			09/04/24 17:14	09/10/24 00:45	1	
Method: SW846 8021B - Volatile Organic Compounds (GC)									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Benzene	ND		0.025	mg/Kg		09/04/24 17:14	09/10/24 00:45	1	
Ethylbenzene	ND		0.049	mg/Kg		09/04/24 17:14	09/10/24 00:45	1	
Toluene	ND		0.049	mg/Kg		09/04/24 17:14	09/10/24 00:45	1	
Xylenes, Total	ND		0.099	mg/Kg		09/04/24 17:14	09/10/24 00:45	1	
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac	
4-Bromofluorobenzene (Surr)	104		48 - 145			09/04/24 17:14	09/10/24 00:45	1	
Method: SW846 8015M/D - Diesel Range Organics (DRO) (GC)									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Diesel Range Organics [C10-C28]	ND		9.5	mg/Kg		09/05/24 10:28	09/07/24 01:37	1	
Motor Oil Range Organics [C28-C40]	ND		48	mg/Kg		09/05/24 10:28	09/07/24 01:37	1	
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac	
Di-n-octyl phthalate (Surr)	95		62 - 134			09/05/24 10:28	09/07/24 01:37	1	
Method: EPA 300.0 - Anions, Ion Chromatography									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Chloride	100		60	mg/Kg		09/05/24 12:27	09/05/24 22:15	20	

QC Sample Results

Client: Vertex
Project/Site: Endurance Lariat Line

Job ID: 885-11064-1

Method: 8015M/D - Gasoline Range Organics (GRO) (GC)

Lab Sample ID: MB 885-11625/1-A						Client Sample ID: Method Blank			
Matrix: Solid						Prep Type: Total/NA			
Analysis Batch: 11898						Prep Batch: 11625			
Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Gasoline Range Organics [C6 - C10]	ND		5.0	mg/Kg		09/04/24 17:14	09/09/24 21:08	1	
Surrogate	MB %Recovery	MB Qualifier	Limits			Prepared	Analyzed	Dil Fac	
4-Bromofluorobenzene (Surr)	108		35 - 166			09/04/24 17:14	09/09/24 21:08	1	

Lab Sample ID: LCS 885-11625/2-A						Client Sample ID: Lab Control Sample			
Matrix: Solid						Prep Type: Total/NA			
Analysis Batch: 11898						Prep Batch: 11625			
Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics [C6 - C10]			25.0	23.8		mg/Kg		95	70 - 130
Surrogate	LCS %Recovery	LCS Qualifier	Limits						
4-Bromofluorobenzene (Surr)	220	S1+	35 - 166						

Lab Sample ID: 885-11064-1 MS						Client Sample ID: BH24-27-0'			
Matrix: Solid						Prep Type: Total/NA			
Analysis Batch: 11898						Prep Batch: 11625			
Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics [C6 - C10]	ND		25.0	25.4		mg/Kg		102	70 - 130
Surrogate	MS %Recovery	MS Qualifier	Limits						
4-Bromofluorobenzene (Surr)	219	S1+	35 - 166						

Lab Sample ID: 885-11064-1 MSD

Client Sample ID: BH24-27-0

Matrix: Solid

Prep Type: Total/NA

Analysis Batch: 11898

Prep Batch: 11625

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics [C6 - C10]	ND		24.9	21.3		mg/Kg		86	70 - 130	18	20
Surrogate	MSD %Recovery	MSD Qualifier	Limits								
4-Bromofluorobenzene (Surr)	211	S1+	35 - 166								

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 885-11625/1-A						Client Sample ID: Method Blank			
Matrix: Solid						Prep Type: Total/NA			
Analysis Batch: 11900						Prep Batch: 11625			
Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Benzene	ND		0.025	mg/Kg		09/04/24 17:14	09/09/24 21:08	1	
Ethylbenzene	ND		0.050	mg/Kg		09/04/24 17:14	09/09/24 21:08	1	
Toluene	ND		0.050	mg/Kg		09/04/24 17:14	09/09/24 21:08	1	

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QC Sample Results

Client: Vertex
Project/Site: Endurance Lariat Line

Job ID: 885-11064-1

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

Lab Sample ID: MB 885-11625/1-A						Client Sample ID: Method Blank		
Matrix: Solid						Prep Type: Total/NA		
Analysis Batch: 11900						Prep Batch: 11625		
Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Xylenes, Total	ND		0.10	mg/Kg		09/04/24 17:14	09/09/24 21:08	1
Surrogate	MB %Recovery	MB Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	105		48 - 145			09/04/24 17:14	09/09/24 21:08	1

Lab Sample ID: LCS 885-11625/3-A					Client Sample ID: Lab Control Sample					
Matrix: Solid					Prep Type: Total/NA					
Analysis Batch: 11900					Prep Batch: 11625					
			Spike	LCS	LCS			%Rec		
Analyte			Added	Result	Qualifier	Unit	D	%Rec	Limits	
Benzene			1.00	1.06		mg/Kg		106	70 - 130	
Ethylbenzene			1.00	1.06		mg/Kg		106	70 - 130	
m,p-Xylene			2.00	2.12		mg/Kg		106	70 - 130	
o-Xylene			1.00	1.03		mg/Kg		103	70 - 130	
Toluene			1.00	1.05		mg/Kg		105	70 - 130	
			LCS	LCS						
Surrogate	%Recovery	Qualifier	Limits							
4-Bromofluorobenzene (Surr)	109		48 - 145							

Lab Sample ID: 885-11064-2 MS					Client Sample ID: BH24-27-2'				
Matrix: Solid					Prep Type: Total/NA				
Analysis Batch: 11900					Prep Batch: 11625				
Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	ND		0.999	1.05		mg/Kg		105	70 - 130
Ethylbenzene	ND		0.999	1.04		mg/Kg		104	70 - 130
m,p-Xylene	ND		2.00	2.08		mg/Kg		104	70 - 130
o-Xylene	ND		0.999	1.02		mg/Kg		102	70 - 130
Toluene	ND		0.999	1.07		mg/Kg		107	70 - 130
Surrogate	MS %Recovery	MS Qualifier	Limits						
4-Bromofluorobenzene (Surr)	108		48 - 145						

Lab Sample ID: 885-11064-2 MSD						Client Sample ID: BH24-27-2'					
Matrix: Solid						Prep Type: Total/NA					
Analysis Batch: 11900						Prep Batch: 11625					
	Sample	Sample	Spike	MSD	MSD				%Rec		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Benzene	ND		0.996	1.02		mg/Kg		102	70 - 130	3	20
Ethylbenzene	ND		0.996	1.02		mg/Kg		103	70 - 130	2	20
m,p-Xylene	ND		1.99	2.03		mg/Kg		102	70 - 130	2	20
o-Xylene	ND		0.996	1.01		mg/Kg		101	70 - 130	1	20
Toluene	ND		0.996	1.02		mg/Kg		103	70 - 130	4	20
	MSD	MSD									
Surrogate	%Recovery	Qualifier	Limits								
4-Bromofluorobenzene (Surr)	106		48 - 145								

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QC Sample Results

Client: Vertex
Project/Site: Endurance Lariat Line

Job ID: 885-11064-1

Method: 8015M/D - Diesel Range Organics (DRO) (GC)

Lab Sample ID: MB 885-11654/1-A

Matrix: Solid

Analysis Batch: 11747

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 11654

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		10	mg/Kg		09/05/24 10:28	09/06/24 17:22	1
Motor Oil Range Organics [C28-C40]	ND		50	mg/Kg		09/05/24 10:28	09/06/24 17:22	1
Surrogate	MB %Recovery	MB Qualifier	Limits			Prepared	Analyzed	Dil Fac
Di-n-octyl phthalate (Surr)	102		62 - 134			09/05/24 10:28	09/06/24 17:22	1

Lab Sample ID: LCS 885-11654/2-A

Matrix: Solid

Analysis Batch: 11747

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 11654

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits	
Diesel Range Organics [C10-C28]	50.0	59.0		mg/Kg		118	60 - 135	
Surrogate	LCS %Recovery	LCS Qualifier	Limits					
Di-n-octyl phthalate (Surr)	102		62 - 134					

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 885-11664/1-A

Matrix: Solid

Analysis Batch: 11764

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 11664

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		3.0	mg/Kg		09/05/24 12:27	09/05/24 17:19	1

Lab Sample ID: LCS 885-11664/2-A

Matrix: Solid

Analysis Batch: 11764

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 11664

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits	
Chloride	30.0	29.0		mg/Kg		97	90 - 110	

Lab Sample ID: MB 885-11764/4

Matrix: Solid

Analysis Batch: 11764

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		0.50	mg/Kg			09/05/24 11:17	1

Lab Sample ID: MRL 885-11764/3

Matrix: Solid

Analysis Batch: 11764

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits	
Chloride	0.500	0.527		mg/L		105	50 - 150	

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QC Association Summary

Client: Vertex
Project/Site: Endurance Lariat Line

Job ID: 885-11064-1

GC VOA

Prep Batch: 11625

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-11064-1	BH24-27-0'	Total/NA	Solid	5030C	
885-11064-2	BH24-27-2'	Total/NA	Solid	5030C	
885-11064-3	TP24-08 8'	Total/NA	Solid	5030C	
885-11064-4	BH24-28 0'	Total/NA	Solid	5030C	
885-11064-5	BH24-28 2'	Total/NA	Solid	5030C	
885-11064-6	BH24-28 4'	Total/NA	Solid	5030C	
MB 885-11625/1-A	Method Blank	Total/NA	Solid	5030C	
LCS 885-11625/2-A	Lab Control Sample	Total/NA	Solid	5030C	
LCS 885-11625/3-A	Lab Control Sample	Total/NA	Solid	5030C	
885-11064-1 MS	BH24-27-0'	Total/NA	Solid	5030C	
885-11064-1 MSD	BH24-27-0'	Total/NA	Solid	5030C	
885-11064-2 MS	BH24-27-2'	Total/NA	Solid	5030C	
885-11064-2 MSD	BH24-27-2'	Total/NA	Solid	5030C	

Analysis Batch: 11898

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-11064-1	BH24-27-0'	Total/NA	Solid	8015M/D	11625
885-11064-2	BH24-27-2'	Total/NA	Solid	8015M/D	11625
885-11064-3	TP24-08 8'	Total/NA	Solid	8015M/D	11625
885-11064-5	BH24-28 2'	Total/NA	Solid	8015M/D	11625
885-11064-6	BH24-28 4'	Total/NA	Solid	8015M/D	11625
MB 885-11625/1-A	Method Blank	Total/NA	Solid	8015M/D	11625
LCS 885-11625/2-A	Lab Control Sample	Total/NA	Solid	8015M/D	11625
885-11064-1 MS	BH24-27-0'	Total/NA	Solid	8015M/D	11625
885-11064-1 MSD	BH24-27-0'	Total/NA	Solid	8015M/D	11625

Analysis Batch: 11900

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-11064-1	BH24-27-0'	Total/NA	Solid	8021B	11625
885-11064-2	BH24-27-2'	Total/NA	Solid	8021B	11625
885-11064-3	TP24-08 8'	Total/NA	Solid	8021B	11625
885-11064-4	BH24-28 0'	Total/NA	Solid	8021B	11625
885-11064-5	BH24-28 2'	Total/NA	Solid	8021B	11625
885-11064-6	BH24-28 4'	Total/NA	Solid	8021B	11625
MB 885-11625/1-A	Method Blank	Total/NA	Solid	8021B	11625
LCS 885-11625/3-A	Lab Control Sample	Total/NA	Solid	8021B	11625
885-11064-2 MS	BH24-27-2'	Total/NA	Solid	8021B	11625
885-11064-2 MSD	BH24-27-2'	Total/NA	Solid	8021B	11625

Analysis Batch: 11993

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-11064-4	BH24-28 0'	Total/NA	Solid	8015M/D	11625

Analysis Batch: 11995

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-11064-3	TP24-08 8'	Total/NA	Solid	8021B	11625

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QC Association Summary

Client: Vertex
Project/Site: Endurance Lariat Line

Job ID: 885-11064-1

GC Semi VOA

Prep Batch: 11654

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-11064-1	BH24-27-0'	Total/NA	Solid	SHAKE	
885-11064-2	BH24-27-2'	Total/NA	Solid	SHAKE	
885-11064-3	TP24-08 8'	Total/NA	Solid	SHAKE	
885-11064-4	BH24-28 0'	Total/NA	Solid	SHAKE	
885-11064-5	BH24-28 2'	Total/NA	Solid	SHAKE	
885-11064-6	BH24-28 4'	Total/NA	Solid	SHAKE	
MB 885-11654/1-A	Method Blank	Total/NA	Solid	SHAKE	
LCS 885-11654/2-A	Lab Control Sample	Total/NA	Solid	SHAKE	

Analysis Batch: 11747

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-11064-1	BH24-27-0'	Total/NA	Solid	8015M/D	11654
885-11064-2	BH24-27-2'	Total/NA	Solid	8015M/D	11654
885-11064-3	TP24-08 8'	Total/NA	Solid	8015M/D	11654
885-11064-5	BH24-28 2'	Total/NA	Solid	8015M/D	11654
885-11064-6	BH24-28 4'	Total/NA	Solid	8015M/D	11654
MB 885-11654/1-A	Method Blank	Total/NA	Solid	8015M/D	11654
LCS 885-11654/2-A	Lab Control Sample	Total/NA	Solid	8015M/D	11654

Analysis Batch: 11911

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-11064-4	BH24-28 0'	Total/NA	Solid	8015M/D	11654

HPLC/IC

Prep Batch: 11664

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-11064-1	BH24-27-0'	Total/NA	Solid	300_Prep	
885-11064-2	BH24-27-2'	Total/NA	Solid	300_Prep	
885-11064-3	TP24-08 8'	Total/NA	Solid	300_Prep	
885-11064-4	BH24-28 0'	Total/NA	Solid	300_Prep	
885-11064-5	BH24-28 2'	Total/NA	Solid	300_Prep	
885-11064-6	BH24-28 4'	Total/NA	Solid	300_Prep	
MB 885-11664/1-A	Method Blank	Total/NA	Solid	300_Prep	
LCS 885-11664/2-A	Lab Control Sample	Total/NA	Solid	300_Prep	

Analysis Batch: 11764

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-11064-1	BH24-27-0'	Total/NA	Solid	300.0	11664
885-11064-2	BH24-27-2'	Total/NA	Solid	300.0	11664
885-11064-5	BH24-28 2'	Total/NA	Solid	300.0	11664
885-11064-6	BH24-28 4'	Total/NA	Solid	300.0	11664
MB 885-11664/1-A	Method Blank	Total/NA	Solid	300.0	11664
MB 885-11764/4	Method Blank	Total/NA	Solid	300.0	
LCS 885-11664/2-A	Lab Control Sample	Total/NA	Solid	300.0	11664
MRL 885-11764/3	Lab Control Sample	Total/NA	Solid	300.0	

Analysis Batch: 11799

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-11064-3	TP24-08 8'	Total/NA	Solid	300.0	11664
885-11064-4	BH24-28 0'	Total/NA	Solid	300.0	11664

Eurofins Albuquerque

Lab Chronicle

Client: Vertex
Project/Site: Endurance Lariat Line

Job ID: 885-11064-1

Client Sample ID: BH24-27-0'

Lab Sample ID: 885-11064-1

Date Collected: 08/30/24 11:26

Matrix: Solid

Date Received: 09/04/24 07:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			11625	AT	EET ALB	09/04/24 17:14
Total/NA	Analysis	8015M/D		1	11898	AT	EET ALB	09/09/24 21:30
Total/NA	Prep	5030C			11625	AT	EET ALB	09/04/24 17:14
Total/NA	Analysis	8021B		1	11900	AT	EET ALB	09/09/24 21:30
Total/NA	Prep	SHAKE			11654	KR	EET ALB	09/05/24 10:28
Total/NA	Analysis	8015M/D		1	11747	KR	EET ALB	09/06/24 23:33
Total/NA	Prep	300_Prep			11664	EH	EET ALB	09/05/24 12:27
Total/NA	Analysis	300.0		20	11764	JT	EET ALB	09/05/24 20:19

Client Sample ID: BH24-27-2'

Lab Sample ID: 885-11064-2

Date Collected: 08/30/24 11:31

Matrix: Solid

Date Received: 09/04/24 07:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			11625	AT	EET ALB	09/04/24 17:14
Total/NA	Analysis	8015M/D		1	11898	AT	EET ALB	09/09/24 22:35
Total/NA	Prep	5030C			11625	AT	EET ALB	09/04/24 17:14
Total/NA	Analysis	8021B		1	11900	AT	EET ALB	09/09/24 22:35
Total/NA	Prep	SHAKE			11654	KR	EET ALB	09/05/24 10:28
Total/NA	Analysis	8015M/D		1	11747	KR	EET ALB	09/06/24 23:58
Total/NA	Prep	300_Prep			11664	EH	EET ALB	09/05/24 12:27
Total/NA	Analysis	300.0		20	11764	JT	EET ALB	09/05/24 20:32

Client Sample ID: TP24-08 8'

Lab Sample ID: 885-11064-3

Date Collected: 08/30/24 12:18

Matrix: Solid

Date Received: 09/04/24 07:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			11625	AT	EET ALB	09/04/24 17:14
Total/NA	Analysis	8015M/D		1	11898	AT	EET ALB	09/09/24 23:40
Total/NA	Prep	5030C			11625	AT	EET ALB	09/04/24 17:14
Total/NA	Analysis	8021B		1	11900	AT	EET ALB	09/09/24 23:40
Total/NA	Prep	5030C			11625	AT	EET ALB	09/04/24 17:14
Total/NA	Analysis	8021B		10	11995	AT	EET ALB	09/10/24 13:45
Total/NA	Prep	SHAKE			11654	KR	EET ALB	09/05/24 10:28
Total/NA	Analysis	8015M/D		100	11747	KR	EET ALB	09/07/24 00:23
Total/NA	Prep	300_Prep			11664	EH	EET ALB	09/05/24 12:27
Total/NA	Analysis	300.0		50	11799	EH	EET ALB	09/06/24 19:16

Lab Chronicle

Client: Vertex
Project/Site: Endurance Lariat Line

Job ID: 885-11064-1

Client Sample ID: BH24-28 0'
Date Collected: 08/30/24 12:25
Date Received: 09/04/24 07:45

Lab Sample ID: 885-11064-4
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			11625	AT	EET ALB	09/04/24 17:14
Total/NA	Analysis	8015M/D		1	11993	AT	EET ALB	09/10/24 14:51
Total/NA	Prep	5030C			11625	AT	EET ALB	09/04/24 17:14
Total/NA	Analysis	8021B		1	11900	AT	EET ALB	09/10/24 00:02
Total/NA	Prep	SHAKE			11654	KR	EET ALB	09/05/24 10:28
Total/NA	Analysis	8015M/D		1	11911	KR	EET ALB	09/10/24 16:05
Total/NA	Prep	300_Prep			11664	EH	EET ALB	09/05/24 12:27
Total/NA	Analysis	300.0		50	11799	EH	EET ALB	09/06/24 19:31

Client Sample ID: BH24-28 2'
Date Collected: 08/30/24 12:29
Date Received: 09/04/24 07:45

Lab Sample ID: 885-11064-5
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			11625	AT	EET ALB	09/04/24 17:14
Total/NA	Analysis	8015M/D		1	11898	AT	EET ALB	09/10/24 00:24
Total/NA	Prep	5030C			11625	AT	EET ALB	09/04/24 17:14
Total/NA	Analysis	8021B		1	11900	AT	EET ALB	09/10/24 00:24
Total/NA	Prep	SHAKE			11654	KR	EET ALB	09/05/24 10:28
Total/NA	Analysis	8015M/D		1	11747	KR	EET ALB	09/07/24 01:12
Total/NA	Prep	300_Prep			11664	EH	EET ALB	09/05/24 12:27
Total/NA	Analysis	300.0		20	11764	JT	EET ALB	09/05/24 22:02

Client Sample ID: BH24-28 4'
Date Collected: 08/30/24 12:32
Date Received: 09/04/24 07:45

Lab Sample ID: 885-11064-6
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			11625	AT	EET ALB	09/04/24 17:14
Total/NA	Analysis	8015M/D		1	11898	AT	EET ALB	09/10/24 00:45
Total/NA	Prep	5030C			11625	AT	EET ALB	09/04/24 17:14
Total/NA	Analysis	8021B		1	11900	AT	EET ALB	09/10/24 00:45
Total/NA	Prep	SHAKE			11654	KR	EET ALB	09/05/24 10:28
Total/NA	Analysis	8015M/D		1	11747	KR	EET ALB	09/07/24 01:37
Total/NA	Prep	300_Prep			11664	EH	EET ALB	09/05/24 12:27
Total/NA	Analysis	300.0		20	11764	JT	EET ALB	09/05/24 22:15

Laboratory References:
EET ALB = Eurofins Albuquerque, 4901 Hawkins NE, Albuquerque, NM 87109, TEL (505)345-3975

Accreditation/Certification Summary

Client: Vertex
Project/Site: Endurance Lariat Line

Job ID: 885-11064-1

Laboratory: Eurofins Albuquerque

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
New Mexico	State	NM9425, NM0901	02-26-25
The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.			
Analysis Method	Prep Method	Matrix	Analyte
300.0	300_Prep	Solid	Chloride
8015M/D	5030C	Solid	Gasoline Range Organics [C6 - C10]
8015M/D	SHAKE	Solid	Diesel Range Organics [C10-C28]
8015M/D	SHAKE	Solid	Motor Oil Range Organics [C28-C40]
8021B	5030C	Solid	Benzene
8021B	5030C	Solid	Ethylbenzene
8021B	5030C	Solid	Toluene
8021B	5030C	Solid	Xylenes, Total
Oregon	NELAP	NM100001	02-26-25

Login Sample Receipt Checklist

Client: Vertex

Job Number: 885-11064-1

Login Number: 11064

List Source: Eurofins Albuquerque

List Number: 1

Creator: Casarrubias, Tracy

Question	Answer	Comment
Radioactivity wasn't checked or is <= background as measured by a survey meter.	True	
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.	False	IDs on containers do not match the COC. Logged in per COC.
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").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

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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

Action 391712

QUESTIONS

Operator: SOLARIS WATER MIDSTREAM, LLC 9651 Katy Fwy Houston, TX 77024	OGRID:
	371643
	Action Number:
	391712
Action Type:	
[C-141] Site Char./Remediation Plan C-141 (C-141-v-Plan)	

QUESTIONS

Prerequisites	
Incident ID (n#)	nAPP2320940667
Incident Name	NAPP2320940667 ENDURANCE LARIAT WATER LINE @ 0
Incident Type	Produced Water Release
Incident Status	Remediation Plan Received

Location of Release Source	
Please answer all the questions in this group.	
Site Name	ENDURANCE LARIAT WATER LINE
Date Release Discovered	07/27/2023
Surface Owner	Federal

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: 210 BBL Recovered: 40 BBL Lost: 170 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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QUESTIONS, Page 2

Action 391712

QUESTIONS (continued)

Operator: SOLARIS WATER MIDSTREAM, LLC 9651 Katy Fwy Houston, TX 77024	OGRID:
	371643
	Action Number:
	391712
Action Type:	
[C-141] Site Char./Remediation Plan C-141 (C-141-v-Plan)	

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: 10/10/2024
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QUESTIONS, Page 3

Action 391712

QUESTIONS (continued)

Operator: SOLARIS WATER MIDSTREAM, LLC 9651 Katy Fwy Houston, TX 77024	OGRID:
	371643
	Action Number:
	391712
Action Type:	
[C-141] Site Char./Remediation Plan C-141 (C-141-v-Plan)	

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 100 and 500 (ft.)
What method was used to determine the depth to ground water	Direct Measurement
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 1 and 5 (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	Greater than 5 (mi.)
A spring or a private domestic fresh water well used by less than five households for domestic or stock watering purposes	Greater than 5 (mi.)
Any other fresh water well or spring	Greater than 5 (mi.)
Incorporated municipal boundaries or a defined municipal fresh water well field	Greater than 5 (mi.)
A wetland	Between 1 and 5 (mi.)
A subsurface mine	Greater than 5 (mi.)
An (non-karst) unstable area	Greater than 5 (mi.)
Categorize the risk of this well / site being in a karst geology	Low
A 100-year floodplain	Greater than 5 (mi.)
Did the release impact areas not on an exploration, development, production, or storage site	Yes

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	No

Soil Contamination Sampling: (Provide the highest observable value for each, in milligrams per kilograms.)

Chloride	(EPA 300.0 or SM4500 Cl B)	3200
TPH (GRO+DRO+MRO)	(EPA SW-846 Method 8015M)	82300
GRO+DRO	(EPA SW-846 Method 8015M)	56300
BTEX	(EPA SW-846 Method 8021B or 8260B)	15.7
Benzene	(EPA SW-846 Method 8021B or 8260B)	0.3

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	01/08/2025
On what date will (or did) the final sampling or liner inspection occur	01/08/2025
On what date will (or was) the remediation complete(d)	02/08/2025
What is the estimated surface area (in square feet) that will be reclaimed	19914
What is the estimated volume (in cubic yards) that will be reclaimed	4350
What is the estimated surface area (in square feet) that will be remediated	19914
What is the estimated volume (in cubic yards) that will be remediated	4350

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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QUESTIONS, Page 4

Action 391712

QUESTIONS (continued)

Operator: SOLARIS WATER MIDSTREAM, LLC 9651 Katy Fwy Houston, TX 77024	OGRID:
	371643
	Action Number:
	391712
Action Type:	
[C-141] Site Char./Remediation Plan C-141 (C-141-v-Plan)	

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.)

(Ex Situ) Excavation and off-site disposal (i.e. dig and haul, hydrovac, etc.)	Yes
Which OCD approved facility will be used for off-site disposal	LEA LAND LANDFILL [fEEM0112342028]
OR which OCD approved well (API) will be used for off-site disposal	Not answered.
OR is the off-site disposal site, to be used, out-of-state	Not answered.
OR is the off-site disposal site, to be used, an NMED facility	Not answered.
(Ex Situ) Excavation and on-site remediation (i.e. On-Site Land Farms)	Not answered.
(In Situ) Soil Vapor Extraction	Not answered.
(In Situ) Chemical processing (i.e. Soil Shredding, Potassium Permanganate, etc.)	Not answered.
(In Situ) Biological processing (i.e. Microbes / Fertilizer, etc.)	Not answered.
(In Situ) Physical processing (i.e. Soil Washing, Gypsum, Disking, etc.)	Not answered.
Ground Water Abatement pursuant to 19.15.30 NMAC	Not answered.
OTHER (Non-listed remedial process)	Not answered.

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: 10/10/2024
--	---

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, Page 5

Action 391712

QUESTIONS (continued)

Operator: SOLARIS WATER MIDSTREAM, LLC 9651 Katy Fwy Houston, TX 77024	OGRID: 371643
	Action Number: 391712
	Action Type: [C-141] Site Char./Remediation Plan C-141 (C-141-v-Plan)

QUESTIONS

Deferral Requests Only	
Only answer the questions in this group if seeking a deferral upon approval this submission. Each of the following items must be confirmed as part of any request for deferral of remediation.	
Requesting a deferral of the remediation closure due date with the approval of this submission	No

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, Page 6

Action 391712

QUESTIONS (continued)

Operator: SOLARIS WATER MIDSTREAM, LLC 9651 Katy Fwy Houston, TX 77024	OGRID: 371643
	Action Number: 391712
	Action Type: [C-141] Site Char./Remediation Plan C-141 (C-141-v-Plan)

QUESTIONS

Sampling Event Information	
Last sampling notification (C-141N) recorded	{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	No

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CONDITIONS

Action 391712

CONDITIONS

Operator: SOLARIS WATER MIDSTREAM, LLC 9651 Katy Fwy Houston, TX 77024	OGRID: 371643
	Action Number: 391712
	Action Type: [C-141] Site Char./Remediation Plan C-141 (C-141-v-Plan)

CONDITIONS

Created By	Condition	Condition Date
nvelez	Remediation plan is approved as written and with the following conditions; 1. Sampling frequency increase from 200 to 400 square feet per one (1) 5-point composite is approved for the excavation floor sampling. Sidewall confirmation sampling will remain at 200 square feet per one (1) 5-point composite. 2. Solaris has 90-days (January 14, 2025) to submit to OCD its appropriate or final remediation closure report.	10/16/2024