



Incident Number: NRM2026231125

## Release Assessment and Closure

Zeus SWD Line

Section 9, Township 24 South, Range 33 East

County: Lea

Vertex File Number: 24E-00851

**Prepared for:**

Tap Rock Resources

**Prepared by:**

Vertex Resource Services Inc.

**Date:**

May 2024

**Tap Rock Resources**  
Zeus SWD Line

**Release Assessment and Closure**  
May 2024

**Incident Closure**  
**Zeus SWD Line**  
**Section 09, Township 24 South, Range 33 East**  
**County: Lea**

Prepared for:  
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5/30/2024  
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Date

  
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PROJECT MANAGER, REPORT REVIEW

5/30/2024  
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Date

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## 1.0 Introduction

Tap Rock Resources (Tap Rock) retained Vertex Resource Services Inc. (Vertex) to conduct a Release Assessment and Closure for a produced water release that occurred on September 3, 2020, at Zeus SWD Line (hereafter referred to as the "site"). Tap Rock submitted an initial C-141 Release Notification (Appendix A) to New Mexico Oil Conservation Division (NMOCD) District 1 on September 11, 2020. Incident ID number NRM2026231125 was assigned to this incident. Vertex submitted a Remediation Plan to NMOCD and NMSLO and it was approved by both agencies on April 10, 2024.

A closure request was submitted on June 10, 2022, due to organizational purposes with the report according to NMOCD. Vertex was retained by Tap Rock to diligently review the report and address the exceedances to closure criteria that remained in situ. It was determined additional excavation to 4 feet below ground surface (bgs) was required to achieve the reclamation closure criteria set forth in 19.15.29.13 *New Mexico Administrative Code* (NMAC) for areas where depth to groundwater is greater than 100 feet.

This report describes the remediation activities associated with the site. The information presented demonstrates that closure criteria established in Table I of 19.15.29.12 of NMAC (New Mexico Oil Conservation Division, 2018) related to NMOCD have been met and all applicable regulations are being followed. This document is intended to serve as a final report to obtain remediation approval from NMOCD for this release, with the understanding that restoration of the release site will take place immediately following remedial activities as per NMAC 19.15.29.13.

## 2.0 Incident Description

The release occurred on September 3, 2020, due to an equipment failure stemming from a leak at a weld on an aboveground produced water poly transfer line. The incident was reported on September 11, 2020, and involved the release of approximately 20 barrels (bbl.) of produced water off-pad in the pasture. Approximately 5 bbl. of free fluid was removed during the initial clean-up. Additional details relevant to the release are presented in the C-141 Report.

## 3.0 Site Characteristics

The site is located approximately 23 miles northwest of Jal, New Mexico (Google Inc., 2024). The legal location for the site is Section 09, Township 24 South and Range 33 East in Lea County, New Mexico on New Mexico State land. The location is typical of oil and gas transfer lines in the Permian Basin and is currently used for oil and gas transportation. The following sections describe in detail the release area of the site on or near the pipeline right-of-way (Figure 1). An aerial photograph and site schematic are presented on Figure 1.

The surrounding landscape is associated with Plains ecological descriptions with elevations ranging between 3,000 and 3,900 feet. The climate is semiarid with an average annual precipitation ranging between 10 and 13 inches. Using information from the United States Department of Agriculture, the dominant vegetation was characterized as shrub-dominated (R070BD003NM), mainly comprising sand sage and mesquite, although bluestem and dropseed grass species also minorly occurring. The surface geology at the site primarily comprises Qep – Eolian and Piedmont deposits, and is characterized as eolian sands and piedmont-slope deposits (New Mexico Bureau of Geology and Mineral Resources, 2024). The predominant

soil texture on the site is loamy sandy and sandy soils (United States Department of Agriculture, Natural Resources Conservation Service, 2024). Additional soil characteristics include a drainage class of well-drained and a low runoff class. The karst geology potential for the site is low (United States Department of the Interior, Bureau of Land Management, 2018).

#### 4.0 Closure Criteria Determination

The nearest groundwater data to the site is a New Mexico Office of the State Engineer (NMOSE) pod (POD C-04824) located approximately 0.22 miles northwest of the site (United States Geological Survey, 2024). The depth to groundwater was determined by drilling a borehole permitted by the NMOSE within a 0.5 mile radius of the site. The borehole was advanced to a depth of 105 feet bgs. The borehole 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 at that time. The borehole was plugged and abandoned according to the WR-08 permit, Well Plugging Plan of Operations, filed with NMOSE. Due to the location of the release, and State and NMOCD regulations, the > 100 ft criteria of NMAC can be applied only soils 4 feet bgs or below; the < 50 ft criteria was applied to all soils less than 4 feet bgs. Documentation related to the exploratory borehole is included in Appendix F.

There is no surface water present at the site. The nearest significant watercourse, as defined in Subsection P of 19.15.17.7 NMAC, is the Nearest Watercourse (National Wetlands Inventory) is located approximately 1.09 miles north of the site (United States Fish and Wildlife Service, 2024).

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

**Tap Rock Resources**  
Zeus SWD Line

**Release Assessment and Closure**  
May 2024

<b>Site Name: Zeus SWD Line</b>			
<b>Spill Coordinates: 32.222241, -103.573974</b>		<b>X: 634376</b>	<b>Y: 3565962</b>
<b>Site Specific Conditions</b>		<b>Value</b>	<b>Unit</b>
1	Depth to Groundwater (nearest reference)	>105	feet
	Distance between release and nearest DTGW reference	1,161	feet
		0.22	miles
	Date of nearest DTGW reference measurement	April 25, 2024	
2	Within 300 feet of any continuously flowing watercourse or any other significant watercourse	5,741	feet
3	Within 200 feet of any lakebed, sinkhole or playa lake (measured from the ordinary high-water mark)	4,192	feet
4	Within 300 feet from an occupied residence, school, hospital, institution or church	27,734	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	5,016	feet
	ii) Within 1000 feet of any fresh water well or spring	11,964	feet
6	Within incorporated municipal boundaries or within a defined municipal fresh water field covered under a municipal ordinance adopted pursuant to Section 3-27-3 NMSA 1978 as amended, unless the municipality specifically approves	No	(Y/N)
7	Within 300 feet of a wetland	2,850	feet
8	Within the area overlying a subsurface mine	No	(Y/N)
	Distance between release and nearest registered mine	105,522	feet
9	Within an unstable area (Karst Map)	Low	Critical High Medium Low
	Distance between release and nearest unstable area	67,738	feet
10	Within a 100-year Floodplain	500	year
	Distance between release and nearest FEMA Zone A (100-year Floodplain)	70,639	feet
11	Soil Type	BE	
12	Ecological Classification	Loamy Sandy & Sandy	
13	Geology	Qep	
	<b>NMAC 19.15.29.12 E (Table 1) Closure Criteria</b>	>100'	<50' 51-100' >100'

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

Table 2. Closure Criteria for Soils to Remediation & Reclamation Standards		
0-4 feet bgs (19.15.29.13)	Constituent	Limit
	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

bgs – below ground surface  
DTGW – depth to groundwater  
TPH – total petroleum hydrocarbons, GRO – gas range organics, DRO – diesel range organics, MRO – motor oil range organics  
BTEX – benzene, toluene, ethylbenzene and xylenes

5.0 Remedial Actions Taken

Remediation efforts began on April 24, 2024, and were finalized on May 21, 2024. Vertex personnel supervised the excavation of impacted soils. Vertex personnel supervised the excavation up to the liner and stock-piled the previously backfilled soil off-site on a 30 mil liner in 100-yard piles. Each stockpile was then field-screened and samples submitted for laboratory analysis for possible contaminants. All of the previous backfilled material was analyzed to be below the strictest criteria and was then used in addition to new backfill for the excavation upon completion. The new backfill material that was sourced locally was also analyzed below closure criteria. Laboratory analyses for the backfill material are included in Table 4.

Field screening was completed to guide the excavation and consisted of analysis using a Photo Ionization Detector (volatile hydrocarbons), Dextsil Petroflag using EPA SW-846 Method 9074 (extractable hydrocarbons) and Titration (chlorides). Field screening results were used to identify areas requiring further remediation. Soils were removed to a depth of 4 feet bgs. Impacted soil was transported by a licensed waste hauler and disposed of at an approved waste management facility. The Daily Field Report documenting the final excavation before backfill is presented in Appendix C.

Notification that confirmatory samples were being collected was provided to NMOCD before each sampling event and are included in Appendix D. On May 2, 2024, a Vertex submitted a variance request for base samples to be collected at every 400 square feet to NMOCD. Confirmatory composite samples were collected from the base of the excavation in 400 square foot increments, as a variance request was approved (Appendix D). Wall samples were collected from the excavation at every 200 square feet. Fifty-four confirmation samples, including 28 base samples and 26 wall samples, were collected for laboratory analysis following NMOCD soil sampling procedures. Samples were submitted to

Envirotech under chain-of-custody protocols and analyzed for BTEX (EPA Method 8021B), total petroleum hydrocarbons (GRO, DRO, MRO – EPA Method 8015D) and total chlorides (EPA Method 300.0). Final confirmatory laboratory results are presented in Table 3, and the laboratory data reports are included in Appendix E. All confirmatory samples collected and analyzed were below the closure criteria for the site.

## 6.0 Closure Request

The release area was remediated by May 24, 2024, and will be backfilled with clean and uncontaminated earthen material sourced locally following closure approval from all appropriate regulatory agencies. Confirmatory samples and samples from all backfill material were analyzed by the laboratory and found to be below reclamation Closure Criteria for Soils Impacted by a Release locations with less than 50 feet depth to groundwater for the top four feet and greater than 100 feet depth groundwater for four feet bgs.

Vertex recommends no additional remediation action to address the impacted area at the site. Laboratory analyses of confirmation samples collected show confirmatory values below NMOCD reclamation closure criteria for areas where depth to groundwater is greater than 100 feet bgs. There are no anticipated risks to human, ecological, or hydrological receptors at the site. The site will be immediately reclaimed, contoured, and seeded with the appropriate NMSLO seed mix for loamy soils when the site achieves Remediation Closure Approval with NMOCD and NMSLO.

Vertex requests that this remediation closure report for the open incident be approved as all closure requirements outlined in Subsection E of 19.15.29.12 NMAC have been met. Tap Rock certifies that all information in this report and the appendices are correct and that they have complied with all applicable closure requirements and conditions specified in Division rules and directives to meet NMOCD requirements to obtain Remediation Closure Approval.

Should you have any questions or concerns, please do not hesitate to contact Chance Dixon at 575.988.1472 or [cdixon@vertex.ca](mailto:cdixon@vertex.ca).

## 7.0 References

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## 8.0 Limitations

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

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

## **FIGURES**





## Zeus SWD Line Release, NMOCD Incident #NRM2026231125 Initial Excavation Extent & Sample Location Map



- ✕ Sidewall Sample
- ◆ Pothole Sample
- Background Sample
- ⊗ Groundwater Monitoring Well
- ◆ Soil Borings
- ▭ Composite Sample
- Pipeline

Date Created: 6/18/2022

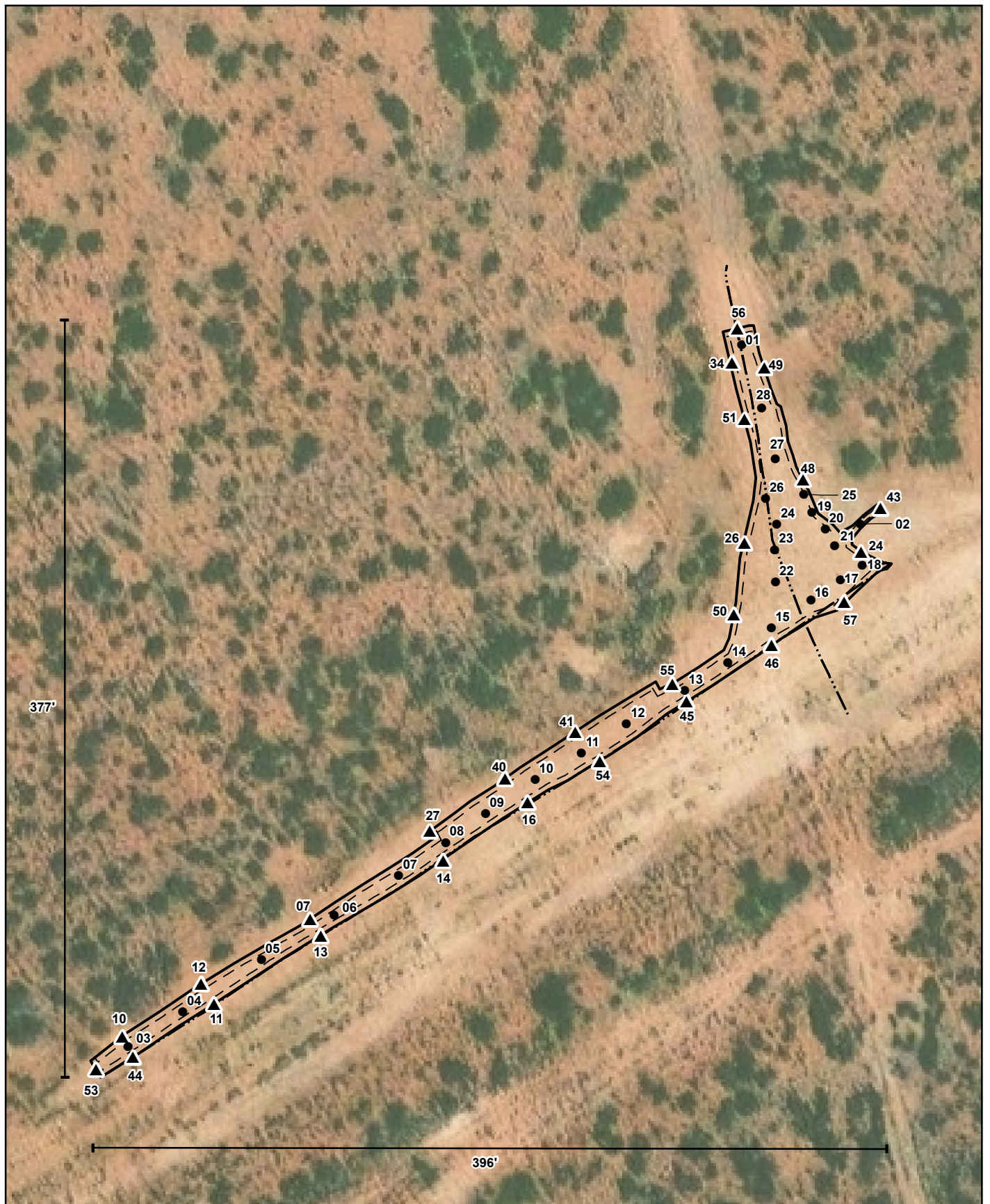
Location: T24S R33E S16 NWNE, Lea County, NM

### Figure 1

Note:  
All locations approximate  
unless otherwise noted







● Base Sample (Prefixed by "BES24-")    ▲ Wall Sample (Prefixed by "WS24")    [ ] Approximated Excavation to 2' bgs (~10,488 sq.ft.)



0 15 30 60 ft  
Map Center: NAD 1983 UTM Zone 13N  
Lat/Long: 32.222170, -103.574483 Date: Jun 03/24



### Confirmatory Schematic Zeus Saltwater Disposal Line

FIGURE:  
**2**



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.

Notes: Georeferenced image provided by Esri, 2023. Site features and from GPS, Vertex Professional Services Ltd., 2024.

VERSATILITY. EXPERTISE.

## **TABLES**

Client Name: Tap Rock Resources

Site Name: Zeus SWD Line

NMOCD Tracking #: NRM2026231125

Project #: 24E-00851

Lab Report(sX): E404283, E405024, E405058, E405076, E405075, E405122, E405156, E405106, E405134, E405180, E405106, E405122, E405134

E405156, E405218, E405180, E405276

Table 3. Confirmatory Sample Field Screen and Laboratory Results - Depth to Groundwater &gt;100 feet bgs

Table 3. Confirmatory Sample Field Screen and Laboratory Results - Depth to Groundwater >100 feet bgs													
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)	
BES24-01	4	05.07.2024	-	50	1,975	ND	ND	ND	ND	ND	ND	ND	4,350
BES24-02	4	05.10.2024	-	-	233	ND	ND	ND	ND	ND	ND	ND	291
BES24-03	4	05.10.2024	-	-	2369	ND	ND	ND	ND	ND	ND	ND	1,610
BES24-04	4	05.10.2024	-	-	2832	ND	ND	ND	ND	ND	ND	ND	1,750
BES24-05	4	05.10.2024	-	-	2832	ND	ND	ND	ND	ND	ND	ND	1,750
BES24-06	4	05.10.2024	-	-	2629	ND	ND	ND	ND	ND	ND	ND	1,580
BES24-07	4	05.10.2024	-	-	4333	ND	ND	ND	ND	ND	ND	ND	1,990
BES24-08	4	05.10.2024	-	-	2889	ND	ND	ND	ND	ND	ND	ND	1,420
BES24-09	4	05.10.2024	-	-	6771	ND	ND	ND	ND	ND	ND	ND	3,970
BES24-10	4	05.10.2024	-	-	2745	ND	ND	ND	ND	ND	ND	ND	3,120
BES24-11	4	05.10.2024	-	-	3682	ND	ND	ND	ND	ND	ND	ND	5,860
BES24-12	4	05.13.2024	-	-	6452	ND	ND	ND	ND	ND	ND	ND	3,210
BES24-13	4	05.13.2024	-	-	6814	ND	ND	ND	ND	ND	ND	ND	4,910
BES24-14	4	05.13.2024	-	-	6237	ND	ND	ND	ND	ND	ND	ND	3,520
BES24-15	4	05.13.2024	-	-	6814	ND	ND	ND	ND	ND	ND	ND	4,420
BES24-16	4	05.13.2024	-	-	7247	ND	ND	ND	ND	ND	ND	ND	6,330
BES24-17	4	05.13.2024	-	-	5010	ND	ND	ND	ND	ND	ND	ND	3,440
BES24-18	4	05.13.2024	-	-	6,020	ND	ND	ND	ND	ND	ND	ND	4,280
BES24-19	4	05.13.2024	-	-	5400	ND	ND	ND	ND	ND	ND	ND	4,650
BES24-20	4	05.13.2024	-	-	1041	ND	ND	ND	ND	ND	ND	ND	2,340
BES24-21	4	05.13.2024	-	-	826	ND	ND	ND	ND	ND	ND	ND	3,220
BES24-22	4	05.13.2024	-	-	638	ND	ND	ND	ND	ND	ND	ND	863
BES24-23	4	05.13.2024	-	-	753	ND	ND	ND	ND	ND	ND	ND	1,790
BES24-24	4	05.13.2024	-	-	1691	ND	ND	ND	ND	ND	ND	ND	4,150
BES24-25	4	05.14.2024	-	-	3293	ND	ND	ND	ND	ND	ND	ND	1,500
BES24-26	4	05.14.2024	-	-	3870	ND	ND	ND	ND	ND	ND	ND	4,140
BES24-27	4	05.14.2024	-	52	4592	ND	ND	ND	ND	ND	ND	ND	3,060
BES24-28	4	05.14.2024	-	-	4448	ND	ND	ND	ND	ND	ND	ND	2,520
WES24-07	4	05.01.2024	-	37	405	ND	ND	ND	ND	ND	ND	ND	83
WES24-10	4	05.02.2024	-	-	530	ND	ND	ND	ND	ND	ND	ND	308
WES24-11	4	05.02.2024	-	-	630	ND	ND	ND	ND	ND	ND	ND	414
WES24-12	4	05.02.2024	-	-	565	ND	ND	ND	ND	ND	ND	ND	479
WES24-13	4	05.02.2024	-	-	582	ND	ND	ND	ND	ND	ND	ND	470
WES24-14	4	05.02.2024	-	-	638	ND	ND	ND	ND	ND	ND	ND	356
WES24-16	4	05.02.2024	-	27	328	ND	ND	ND	ND	ND	ND	ND	182
WES24-24	4	05.04.2024	-	-	400	ND	ND	ND	ND	ND	ND	ND	182
WES24-26	4	05.04.2024	-	-	618	ND	ND	ND	ND	ND	ND	ND	374
WES24-27	4	05.06.2024	-	-	478	ND	ND	ND	ND	ND	ND	ND	552
WES24-32	4	05.07.2024	-	-	430	ND	ND	ND	ND	ND	ND	ND	511
WES24-40	4	05.09.2024	-	-	185	ND	ND	ND	ND	ND	ND	ND	ND
WES24-41	4	05.09.2024	-	-	168	ND	ND	ND	ND	ND	ND	ND	ND
WES24-43	4	05.09.2024	-	-	210	ND	ND	ND	ND	ND	ND	ND	ND
WES24-44	4	05.14.2024	-	-	281	ND	ND	ND	ND	ND	ND	ND	242
WES24-45	4	05.14.2024	-	-	268	ND	ND	ND	ND	ND	ND	ND	577
WES24-46	4	05.14.2024	-	-	570	ND	ND	ND	ND	ND	ND	ND	358
WES24-48	4	05.14.2024	-	-	68	ND	ND	ND	ND	ND	ND	ND	ND
WES24-49	4	05.14.2024	-	-	43	ND	ND	ND	ND	ND	ND	ND	ND
WES24-50	4	05.14.2024	-	-	125	ND	ND	ND	ND	ND	ND	ND	65

Table 3. Confirmatory Sample Field Screen and Laboratory Results - Depth to Groundwater >100 feet bgs													
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)	
WES24-51	4	05.14.2024	-	-	206	ND	ND	ND	ND	ND	ND	ND	ND
WES24-52	4	05.14.2024	-	-	238	ND	ND	ND	ND	ND	ND	ND	178
WES24-53	0-4	05.16.2024	-	-	205	ND	ND	ND	ND	ND	ND	ND	86
WES24-54	0-4	05.16.2024	-	-	175	ND	ND	ND	ND	ND	ND	ND	45
WES24-55	0-4	05.16.2024	-	-	155	ND	ND	ND	ND	ND	ND	ND	231
WES24-56	0-4	05.16.2024	-	-	243	ND	ND	ND	ND	ND	ND	ND	205
WES24-57	0-4	05.20.2024	-	-	304	ND	ND	ND	ND	ND	ND	ND	319

"-" indicates not analyzed/assessed

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

Client Name: Tap Rock  
 Site Name: Zeus SWD Line  
 NMOCD Tracking #: NRM2026231125  
 Project #: 24E-00851  
 Lab  
 Report(sX):  
 E405358,  
 E404283,  
 E405024

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)	
Stock Pile 1	2	04.25.24	0	23	462	ND	ND	ND	ND	ND	ND	ND	279
Stock Pile 2	2	04.25.24	0	-	250	ND	ND	ND	ND	ND	ND	ND	69
Stock Pile 3	2	04.25.24	0	-	290	ND	ND	ND	ND	ND	ND	ND	ND
Stock Pile 4	2	05.01.24	0	-	-	ND	ND	ND	ND	ND	ND	ND	27
Stock Pile 5	2	05.01.24	0	-	345	ND	ND	ND	ND	ND	ND	ND	ND
Stock Pile 6	2	05.01.24	0	43	250	ND	ND	ND	ND	ND	ND	ND	40
Stock Pile 7	2	05.01.24	-	-	-	ND	ND	ND	ND	ND	ND	ND	79
Stock Pile 8	2	05.01.24	-	-	-	ND	ND	ND	ND	ND	ND	ND	50
Backfill24-01	0	05.23.24	-	33	105	ND	ND	ND	ND	ND	ND	ND	ND
Backfill24-02	0	05.23.24	-	35	110	ND	ND	ND	ND	ND	ND	ND	ND
Backfill24-03	0	05.23.24	-	36	103	ND	ND	ND	ND	ND	ND	ND	ND
Backfill24-04	0	05.23.24	-	34	145	ND	ND	ND	ND	ND	ND	ND	ND
Backfill24-05	0	05.23.24	-	29	88	ND	ND	ND	ND	ND	ND	ND	ND
Backfill24-06	0	05.23.24	-	33	108	ND	ND	ND	ND	ND	ND	ND	ND
Backfill24-07	0	05.23.24	-	37	115	ND	ND	ND	ND	ND	ND	ND	ND
Backfill24-08	0	05.23.24	-	75	107	ND	ND	ND	ND	ND	ND	ND	ND
Backfill24-09	0	05.23.24	-	42	127	ND	ND	ND	ND	ND	ND	ND	ND

"ND" Not Detected at the Reporting Limit

"-" indicates not analyzed/assessed

**TABLE 1.0**  
**SOIL SCREENING RESULTS**  
**ZEUS SWD LINE**  
**OCD INCIDENT #NRM2026231125**  
**LEA COUNTY, NEW MEXICO**  
**TAP ROCK OPERATING LLC.**

Sample ID	Sample Date	Sample Depth (ft. bgs)	PID Reading (PPM)
S-1	9/23/2020	2.0	0.2
S-2	9/23/2020	2.0	0.2
S-3	9/23/2020	2.5	0.2
S-4	9/23/2020	4.0	0.2
S-5	9/23/2020	4.7	0.3
S-6	9/23/2020	4.7	0.3
S-7	9/23/2020	4.7	0.2
S-8	9/23/2020	2.0	0.3
S-9	9/23/2020	2.0	0.3
S-10	9/23/2020	2.0	0.4
S-11	9/23/2020	2.0	0.2
S-12	9/23/2020	2.0	0.5
S-13	9/23/2020	2.0	0.2
S-14	9/23/2020	2.0	0.3
S-15	9/23/2020	2.0	0.2
S-16	9/23/2020	2.0	0.2
S-17	9/23/2020	2.0	0.2
S-18	9/23/2020	SW 2.0	0.5
S-19	9/23/2020	SW 2.0	0.4
S-20	9/23/2020	SW 2.0	0.4
S-21	9/23/2020	SW 2.0	0.5
S-22	9/23/2020	SW 2.0	0.5
S-23	9/23/2020	BG 1	0.3
S-24	9/23/2020	BG 2	0.3

**Notes:**

ft. bgs = Feet below ground surface

PID = Photoionization Detector

PPM = Parts per million

BG = Background

SW = Sidewall

**TABLE 2.0**  
**SOIL ANALYTICAL RESULTS**  
**ORGANIC COMPOUNDS**  
**ZEUS SWD LINE**  
**OCD INCIDENT #NRM2026231125**  
**LEA COUNTY, NEW MEXICO**  
**TAP ROCK OPERATING LLC.**

Sample ID	Sample Date	Sample Depth (ft. bgs)	TPH (mg/kg)	Total BTEX (mg/kg)	Benzene (mg/kg)	Toluene (mg/kg)	Ethylbenzene (mg/kg)	Total Xylenes (mg/kg)
<b>NMOCD Table I Soil Standard (mg/kg)</b>			<b>100</b>	<b>50</b>	<b>10</b>			
S-1	9/23/2020	2.0	< 50	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
S-2	9/23/2020	2.0	< 50	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
S-3	9/23/2020	2.5	< 50	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
S-4	9/23/2020	4.0	< 50	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
S-5	9/23/2020	4.7	< 50	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
S-6	9/23/2020	4.7	< 50	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
S-7	9/23/2020	4.7	< 50	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
S-8	9/23/2020	2.0	< 50	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
S-9	9/23/2020	2.0	< 50	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
S-10	9/23/2020	2.0	< 50	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
S-11	9/23/2020	2.0	< 50	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
S-12	9/23/2020	2.0	< 50	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
S-13	9/23/2020	2.0	< 50	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
S-14	9/23/2020	2.0	< 50	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
S-15	9/23/2020	2.0	< 50	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
S-16	9/23/2020	2.0	< 50	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
S-17	9/23/2020	2.0	< 50	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
S-18	9/23/2020	2.0	< 50	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
S-19	9/23/2020	2.0	< 50	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
S-20	9/23/2020	2.0	< 50	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
S-21	9/23/2020	2.0	< 50	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
S-22	9/23/2020	2.0	< 50	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
S-23	9/23/2020	2.0	< 50	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
S-24	9/23/2020	2.0	< 50	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002

**Notes:**

Standards for soil are taken from 19.15.29.12(C)(4) NMAC, Table I,

TPH = Total Petroleum Hydrocarbons (Gasoline Range Organics [GRO], Diesel Range Organics [DRO], Motor Oil Range Organics [MRO])

NMOCD = New Mexico Oil Conservation Division

NMAC = New Mexico Administrative Code

&lt; = Analytical result is less than the indicated laboratory reporting limit

BTEX = Benzene, Toluene, Ethylbenzene, and Total Xylenes

mg/kg = Milligrams per kilogram

ft. bgs. = Feet below ground surface



**TABLE 3.0**  
**SOIL ANALYTICAL RESULTS**  
**CHLORIDES**  
**ZEUS SWD LINE**  
**OCD INCIDENT #NRM2026231125**  
**LEA COUNTY, NEW MEXICO**  
**TAP ROCK OPERATING LLC.**

Sample ID	Sample Date	Sample Depth (ft. bgs)	Chlorides (mg/kg)
<b>NMOCD Table I Soil Standard (mg/kg)</b>			<b>10,000</b>
S-1	9/23/2020	2.0	2,490
S-2	9/23/2020	2.0	8,010
S-3	9/23/2020	2.5	<b>11,000</b>
S-4	9/23/2020	4.0	7,250
S-5	9/23/2020	4.7	5,160
S-6	9/23/2020	4.7	6,230
S-7	9/23/2020	4.7	6,060
S-8	9/23/2020	2.0	442
S-9	9/23/2020	2.0	5,810
S-10	9/23/2020	2.0	6,210
S-11	9/23/2020	2.0	6,570
S-12	9/23/2020	2.0	2,070
S-13	9/23/2020	2.0	174
S-14	9/23/2020	2.0	1,250
S-15	9/23/2020	2.0	4,540
S-16	9/23/2020	2.0	2,880
S-17	9/23/2020	2.0	4,450
S-18	9/23/2020	2.0	6,940
S-19	9/23/2020	2.0	6,980
S-20	9/23/2020	2.0	7,390
S-21	9/23/2020	2.0	407
S-22	9/23/2020	2.0	5,050
S-23	9/23/2020	2.0	4.82
S-24	9/23/2020	2.0	4.76
PH-001	10/26/2020	5.7	< 10.1
PH-002	10/26/2020	4.8	12.6
PH-003	10/26/2020	5.4	< 10.0
PH-004	10/26/2020	5.2	< 9.98
PH-005	10/26/2020	4.2	20.4
PH-006	10/26/2020	5.0	10.1
PH-007	10/26/2020	5.4	45.0
PH-008	10/26/2020	5.0	12.4
PH-009	10/26/2020	6.6	< 9.98

**TABLE 3.0**  
**SOIL ANALYTICAL RESULTS**  
**CHLORIDES**  
**ZEUS SWD LINE**  
**OCD INCIDENT #NRM2026231125**  
**LEA COUNTY, NEW MEXICO**  
**TAP ROCK OPERATING LLC.**

Sample ID	Sample Date	Sample Depth (ft. bgs)	Chlorides (mg/kg)
<b>NMOCD Table I Soil Standard (mg/kg)</b>			<b>10,000</b>
PH-010	10/26/2020	6.3	< 10.1
EPH-011	10/26/2020	6.5	<b>10,400</b>
EPH-012	10/26/2020	10.7	9,540
EPH-013	10/26/2020	6.5	7,600
EPH-014	10/26/2020	10.7	8,000
EPH-015	10/26/2020	5.3	<b>11,700</b>
EPH-016	10/26/2020	6.6	<b>11,100</b>
EPH-017	10/26/2020	5.7	9,220
EPH-018	10/26/2020	6.3	<b>11,000</b>
EPH-019	10/26/2020	5.2	<b>11,200</b>
EPH-020	10/26/2020	7.0	<b>11,100</b>
EPH-021	10/26/2020	5.7	<b>11,100</b>
EPH-022	10/26/2020	7.3	<b>11,300</b>
EPH-023	10/26/2020	6.1	9,320
EPH-024	10/26/2020	6.5	8,390
H Top Soil	11/18/2020	0.0	<b>18,600</b>
H2	11/18/2020	2.0	7,350
H4	11/18/2020	4.0	3,990
H6	11/18/2020	6.0	2,600
H8	11/18/2020	8.0	3,130
H10	11/18/2020	10.0	3,650
H12	11/18/2020	12.0	7,680
H14	11/18/2020	14.0	6,280
H16	11/18/2020	16.0	8,290
H18	11/18/2020	18.0	9,010
H20	11/18/2020	20.0	9,210
H22	11/18/2020	22.0	9,670
H24	11/18/2020	24.0	8,060
H26	11/18/2020	26.0	1,610
H28	11/18/2020	28.0	844
H30	11/18/2020	30.0	544
H32	11/18/2020	32.0	1,570
H34	11/18/2020	34.0	1,060

**TABLE 3.0**  
**SOIL ANALYTICAL RESULTS**  
**CHLORIDES**  
**ZEUS SWD LINE**  
**OCD INCIDENT #NRM2026231125**  
**LEA COUNTY, NEW MEXICO**  
**TAP ROCK OPERATING LLC.**

Sample ID	Sample Date	Sample Depth (ft. bgs)	Chlorides (mg/kg)
<b>NMOCD Table I Soil Standard (mg/kg)</b>			<b>10,000</b>
SH Top Soil	11/18/2020	0.0	1,240
SH2	11/18/2020	2.0	173
SH4	11/18/2020	4.0	19.7
SH6	11/18/2020	6.0	36.2
SH8	11/18/2020	8.0	126
SH10	11/18/2020	10.0	137
SH12	11/18/2020	12.0	136
SH14	11/18/2020	14.0	248
SH16	11/18/2020	16.0	327
SH18	11/18/2020	18.0	271
SH20	11/18/2020	20.0	229
SH22	11/18/2020	22.0	174
SH24	11/18/2020	24.0	108
SH26	11/18/2020	26.0	89.1
SH28	11/18/2020	28.0	225
SH30	11/18/2020	30.0	237
TH Top Soil	11/18/2020	0.0	<b>10,700</b>
TH2	11/18/2020	2.0	27.7
TH4	11/18/2020	4.0	24.4
TH6	11/18/2020	6.0	25.5
TH8	11/18/2020	8.0	299
TH10	11/18/2020	10.0	7,150
TH12	11/18/2020	12.0	<b>13,800</b>
TH14	11/18/2020	14.0	8,590
TH16	11/18/2020	16.0	9,740
TH18	11/18/2020	18.0	9,790
TH20	11/18/2020	20.0	<b>10,500</b>
TH22	11/18/2020	22.0	9,470
TH24	11/18/2020	24.0	6,620
TH26	11/18/2020	26.0	7,800
TH28	11/18/2020	28.0	6,670
TH30	11/18/2020	30.0	5,500
WW Top Soil	11/18/2020	0.0	7,820

**TABLE 3.0**  
**SOIL ANALYTICAL RESULTS**  
**CHLORIDES**  
**ZEUS SWD LINE**  
**OCD INCIDENT #NRM2026231125**  
**LEA COUNTY, NEW MEXICO**  
**TAP ROCK OPERATING LLC.**

Sample ID	Sample Date	Sample Depth (ft. bgs)	Chlorides (mg/kg)
<b>NMOCD Table I Soil Standard (mg/kg)</b>			<b>10,000</b>
WW2	11/18/2020	2.0	11.3
WW4	11/18/2020	4.0	363
WW6	11/18/2020	6.0	501
WW8	11/18/2020	8.0	786
WW10	11/18/2020	10.0	255
WW12	11/18/2020	12.0	1,110
WW14	11/18/2020	14.0	785
WW16	11/18/2020	16.0	5,250
WW18	11/18/2020	18.0	8,660
WW20	11/18/2020	20.0	9,690
WW22	11/18/2020	22.0	9,340
WW24	11/18/2020	24.0	<b>11,500</b>
WW26	11/18/2020	26.0	5,990
WW28	11/18/2020	28.0	198
WW30	11/18/2020	30.0	704
WW32	11/18/2020	32.0	516
WW34	11/18/2020	34.0	336
WW36	11/18/2020	36.0	322
WW38	11/18/2020	38.0	198
WW40	11/18/2020	40.0	802
WW42	11/18/2020	42.0	159
WW44	11/18/2020	44.0	258
WW46	11/18/2020	46.0	179
WW48	11/18/2020	48.0	156
WW50	11/18/2020	50.0	199
WW52	11/18/2020	52.0	206
WW54	11/18/2020	54.0	151
WW55	11/18/2020	55.0	163
Hole 1 Top Soil	3/3/2021	0.0	< 5.02
Hole 1 SB-1	3/3/2021	2.0	< 4.99
Hole 1 SB-2	3/3/2021	4.0	< 4.96
Hole 1 SB-3	3/3/2021	6.0	17.8
Hole 1 SB-4	3/3/2021	8.0	44.4

**TABLE 3.0**  
**SOIL ANALYTICAL RESULTS**  
**CHLORIDES**  
**ZEUS SWD LINE**  
**OCD INCIDENT #NRM2026231125**  
**LEA COUNTY, NEW MEXICO**  
**TAP ROCK OPERATING LLC.**

Sample ID	Sample Date	Sample Depth (ft. bgs)	Chlorides (mg/kg)
<b>NMOCD Table I Soil Standard (mg/kg)</b>			<b>10,000</b>
Hole 1 SB-5	3/3/2021	10.0	174
Hole 2 Top Soil	3/3/2021	0.0	9.88
Hole 2 SB-1	3/3/2021	2.0	< 5.04
Hole 2 SB-2	3/3/2021	4.0	< 5.00
Hole 2 SB-3	3/3/2021	6.0	8.16
Hole 2 SB-4	3/3/2021	8.0	13.0
Hole 2 SB-5	3/3/2021	10.0	1620
Hole 3 Top Soil	3/3/2021	0.0	26.6
Hole 3 SB-1	3/3/2021	2.0	7.35
Hole 3 SB-2	3/3/2021	4.0	11.4
Hole 3 SB-3	3/3/2021	6.0	59.0
Hole 3 SB-4	3/3/2021	8.0	120
Hole 3 SB-5	3/3/2021	10.0	398
Hole 4 Top Soil	3/3/2021	0.0	114
Hole 4 SB-1	3/3/2021	2.0	37.8
Hole 4 SB-2	3/3/2021	4.0	22.5
Hole 4 SB-3	3/3/2021	6.0	257
Hole 4 SB-3B	3/3/2021	7.0	346
Hole 4 SB-4	3/3/2021	8.0	662
Hole 4 SB-6	3/3/2021	10.0	750
Hole 5 Top Soil	3/3/2021	0.0	326
Hole 5 SB-1	3/3/2021	2.0	< 5.05
Hole 5 SB-2	3/3/2021	4.0	< 5.03
Hole 5 SB-3	3/3/2021	6.0	<4.96
Hole 5 SB-4	3/3/2021	8.0	11.0
Hole 5 SB-5	3/3/2021	10.0	77.2
Hole 6 Top Soil	3/3/2021	0.0	15.1
Hole 6 SB-1	3/3/2021	2.0	8.97
Hole 6 SB-2	3/3/2021	4.0	6.3
Hole 6 SB-3	3/3/2021	6.0	16.2
Hole 6 SB-4	3/3/2021	8.0	72.0
Hole 6 SB-5	3/3/2021	10.0	89.2

**TABLE 3.0**  
**SOIL ANALYTICAL RESULTS**  
**CHLORIDES**  
**ZEUS SWD LINE**  
**OCD INCIDENT #NRM2026231125**  
**LEA COUNTY, NEW MEXICO**  
**TAP ROCK OPERATING LLC.**

Sample ID	Sample Date	Sample Depth (ft. bgs)	Chlorides (mg/kg)
NMOCD Table I Soil Standard (mg/kg)			10,000

**Notes:**

Standard for soil is taken from 19.15.29.12(C)(4) NMAC, Table I,

Depth to ground water 51 - 100 feet

**BOLD = Result above closure criteria**

NMOCD = New Mexico Oil Conservation Division

NMAC = New Mexico Administrative Code

< = Analytical result is less than the indicated laboratory reporting limit

mg/kg = Milligrams per kilogram

ft. bgs = Feet below ground surface

## **APPENDIX A - NMOCD C-141 Report**

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

State of New Mexico  
Energy Minerals and Natural  
Resources Department  
  
Oil Conservation Division  
1220 South St. Francis Dr.  
Santa Fe, NM 87505

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

Incident ID	NRM2026231125
District RP	
Facility ID	
Application ID	

Release Notification

Responsible Party

Responsible Party Tap Rock Operating LLC	OGRID 37243
Contact Name Brad Morton	Contact Telephone (720) 460-3518
Contact email bmorton@taprk.com	Incident # (assigned by OCD) NRM2026231125
Contact mailing address 523 Park Point Dr #200, Golden, CO, 80401	

Location of Release Source

Latitude 32.224671 Longitude -103.574627  
(NAD 83 in decimal degrees to 5 decimal places)

Site Name Zeus SWD Line	Site Type Above Ground Transfer Line
Date Release Discovered 9/3/20	API# (if applicable)

Unit Letter	Section	Township	Range	County
O	9	24S	33E	Lea

Surface Owner: ☒ State ☐ Federal ☐ Tribal ☐ Private (Name: )

Nature and Volume of Release

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

<input type="checkbox"/> Crude Oil	Volume Released (bbls)	Volume Recovered (bbls)
<input checked="" type="checkbox"/> Produced Water	Volume Released (bbls) 20	Volume Recovered (bbls) 5
	Is the concentration of dissolved chloride in the produced water >10,000 mg/l?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
<input type="checkbox"/> Condensate	Volume Released (bbls)	Volume Recovered (bbls)
<input type="checkbox"/> Natural Gas	Volume Released (Mcf)	Volume Recovered (Mcf)
<input type="checkbox"/> Other (describe)	Volume/Weight Released (provide units)	Volume/Weight Recovered (provide units)

Cause of Release Equipment failure, leak at weld on above-ground produced water poly transfer line




Incident ID	NRM2026231125
District RP	
Facility ID	
Application ID	

Was this a major release as defined by 19.15.29.7(A) NMAC?  <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If YES, for what reason(s) does the responsible party consider this a major release?
If YES, was immediate notice given to the OCD? By whom? To whom? When and by what means (phone, email, etc)?	

### Initial Response

*The responsible party must undertake the following actions immediately unless they could create a safety hazard that would result in injury*

<input checked="" type="checkbox"/> The source of the release has been stopped. <input checked="" type="checkbox"/> The impacted area has been secured to protect human health and the environment. <input checked="" type="checkbox"/> Released materials have been contained via the use of berms or dikes, absorbent pads, or other containment devices. <input checked="" type="checkbox"/> All free liquids and recoverable materials have been removed and managed appropriately.	
If all the actions described above have <u>not</u> been undertaken, explain why:	
Per 19.15.29.8 B. (4) NMAC the responsible party may commence remediation immediately after discovery of a release. If remediation has begun, please attach a narrative of actions to date. If remedial efforts have been successfully completed or if the release occurred within a lined containment area (see 19.15.29.11(A)(5)(a) NMAC), please attach all information needed for closure evaluation.	
I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.	
Printed Name: <u>Christian Combs</u>	Title: <u>Regulatory &amp; EHS Manager</u>
Signature: <u></u>	Date: <u>9/11/2020</u>
email: <u>ccombs@taprk.com</u>	Telephone: <u>720-360-4028</u>
<b><u>OCD Only</u></b>	
Received by: _____	Date: _____

Incident ID	NRM2026231125
District RP	
Facility ID	
Application ID	

## Site Assessment/Characterization

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

What is the shallowest depth to groundwater beneath the area affected by the release?	<u>53.17</u> (ft bgs)
Did this release impact groundwater or surface water?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 300 feet of a continuously flowing watercourse or any other significant watercourse?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 200 feet of any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark)?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 300 feet of an occupied permanent residence, school, hospital, institution, or church?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 500 horizontal feet of a spring or a private domestic fresh water well used by less than five households for domestic or stock watering purposes?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 1000 feet of any other fresh water well or spring?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within incorporated municipal boundaries or within a defined municipal fresh water well field?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 300 feet of a wetland?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release overlying a subsurface mine?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release overlying an unstable area such as karst geology?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within a 100-year floodplain?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Did the release impact areas <b>not</b> on an exploration, development, production, or storage site?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No

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

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

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

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

State of New Mexico  
Oil Conservation Division

Page 4

Incident ID	NRM2026231125
District RP	
Facility ID	
Application ID	

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

Printed Name: Brad Morton Title: Production Manager

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

email: bmorton@taprk.com Telephone: 720.460.3518

**OCD Only**

Received by: \_\_\_\_\_ Date: \_\_\_\_\_

Incident ID	NRM2026231125
District RP	
Facility ID	
Application ID	

## Closure

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

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

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

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

Printed Name: Brad Morton Title: Production Manager  
Signature: \_\_\_\_\_ Date: \_\_\_\_\_  
email: bmorton@taprk.com Telephone: 720.460.3518

**OCD Only**

Received by: \_\_\_\_\_ Date: \_\_\_\_\_

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

Closure Approved by: \_\_\_\_\_ Date: \_\_\_\_\_

Printed Name: \_\_\_\_\_ Title: \_\_\_\_\_

## **APPENDIX B – Closure Criteria Research Documentation**





Zeus SWD Line - Watercourse: 1.09 mi (5741 feet) away



March 15, 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.





Zeus SWD Line - Lakebed: 0.79 mi (4192 feet) away



March 15, 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 Residence:  
5.25 miles (27,734 feet) away

-  Distance to Residence
-  Residence



Google Earth




Image © 2024 Airbus  
Image Landsat / Copernicus  
SWD



## Zeus SWD Line

Distance to Livestock Well:  
0.95 miles (5,016 feet) away

### Legend

-  C-02308 Livestock Well
-  Distance to Livestock Well
-  Zeus SWD Release Area

C-02308 Livestock Well

Tap Rock

NEPTUNE LGL

Zeus SWD Release Area






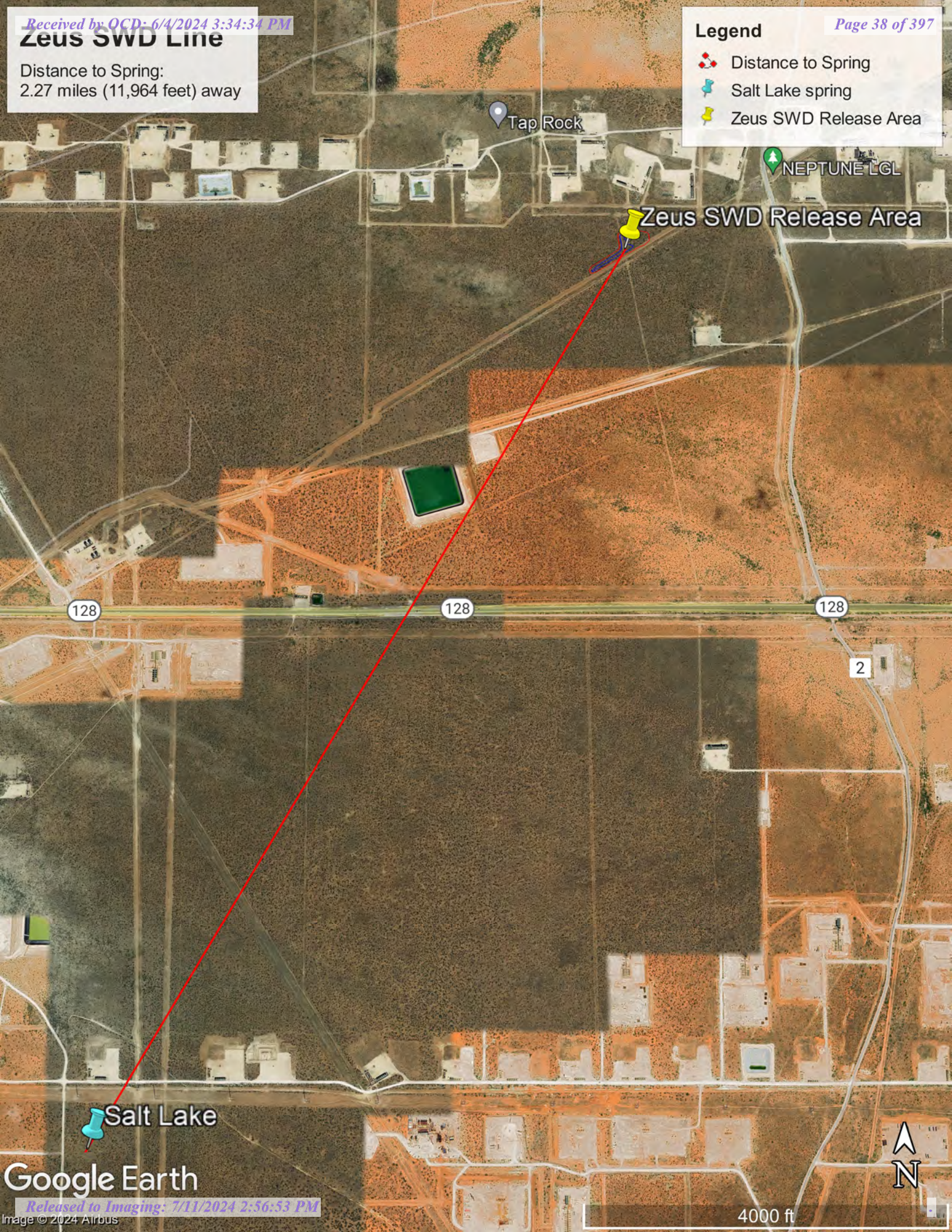


# Zeus SWD Line

Distance to Spring:  
2.27 miles (11,964 feet) away

## Legend

-  Distance to Spring
-  Salt Lake spring
-  Zeus SWD Release Area



Google Earth



Distance to Nearest Municipality:  
Jal is 23.27 miles,  
(122,875 feet) away

Legend

Distance to Municipality

Nearest Municipality

Zeus SWD Release Area



Zeus SWD Release Area

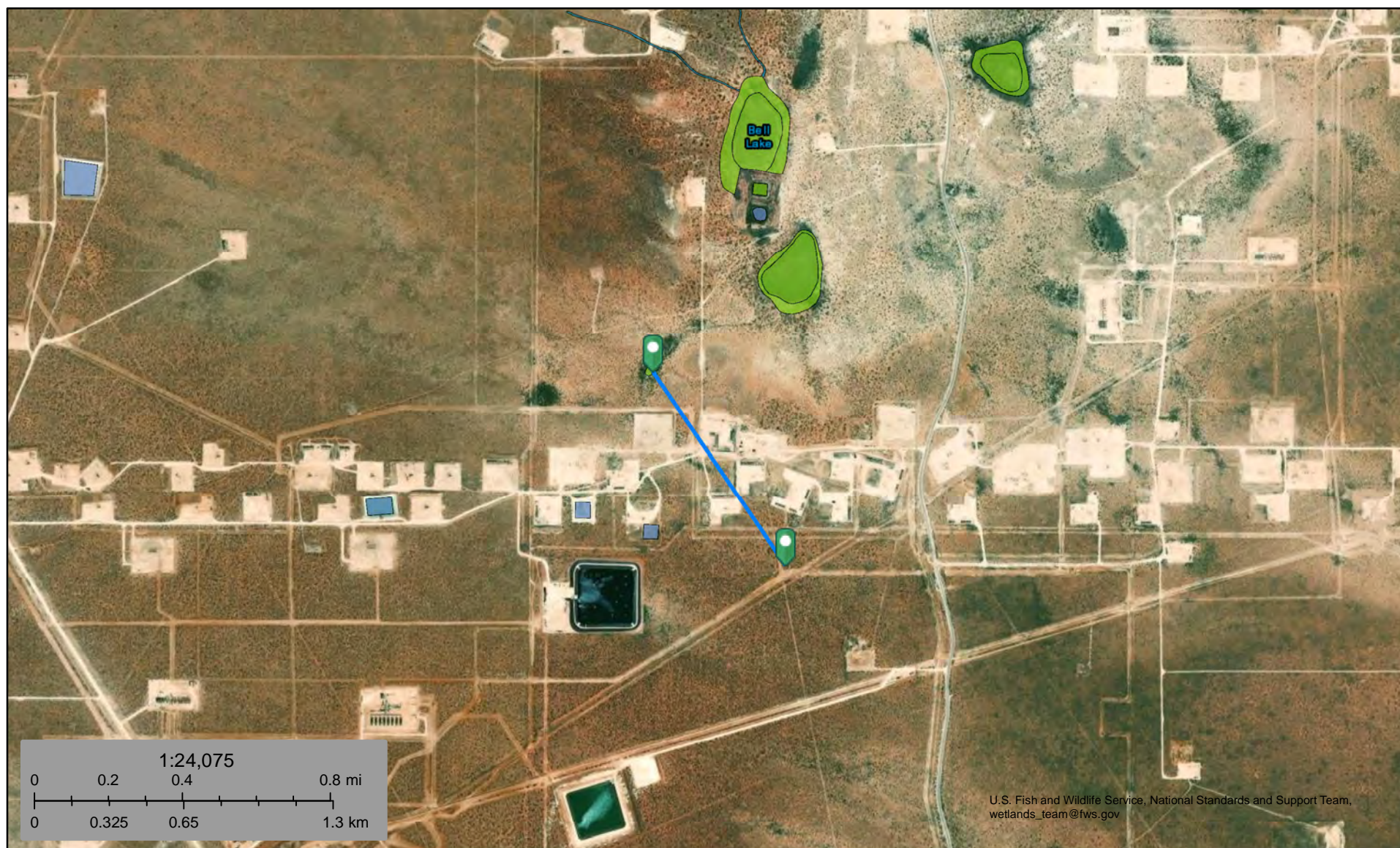
Google Earth

Image © 2024 Airbus  
Image Landsat / Copernicus





Zeus SWD Line - Wetland: 0.54 (2850 feet) away



March 15, 2024

**Wetlands**

- Estuarine and Marine Deepwater
- Estuarine and Marine Wetland

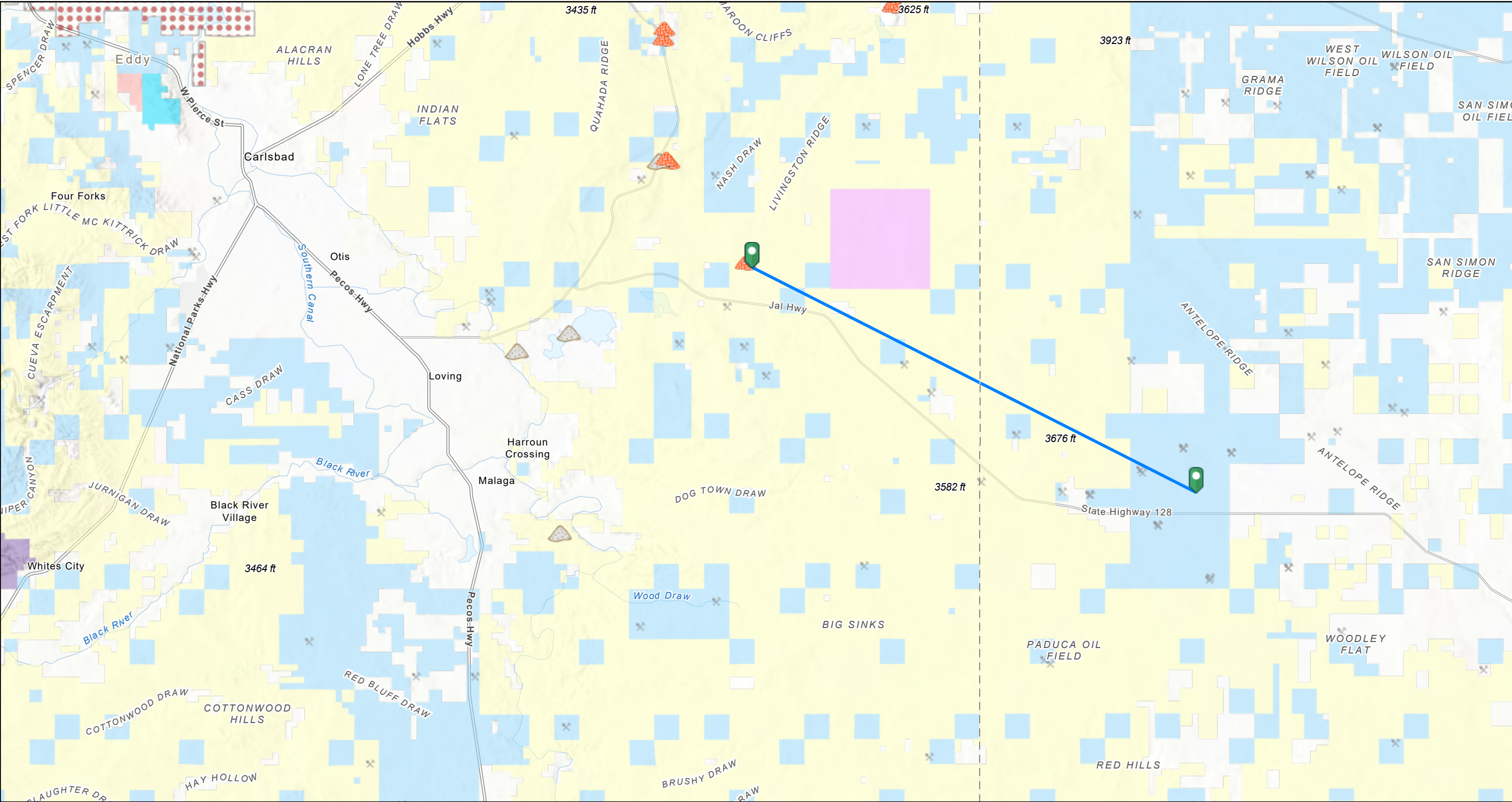
- Freshwater Emergent Wetland
- Freshwater Forested/Shrub Wetland
- Freshwater Pond

- 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.



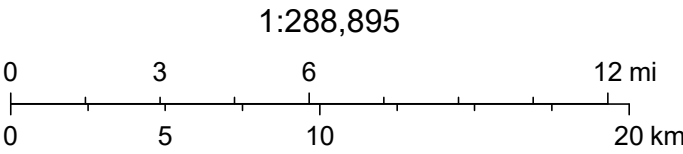
# Subsurface Mine: 20 mi (105,522 feet) away



3/15/2024, 12:04:34 PM

Registered Mines

✕ Aggregate, Stone etc.	Potash	BOR	P
✕ Aggregate, Stone etc.	Salt	DOD	S
✕ Aggregate, Stone etc.	Land Ownership	DOE	SP
✕ Aggregate, Stone etc.	BLM	NPS	








Texas Parks & Wildlife, CONANP, Esri, TomTom, Garmin, SafeGraph, METI/NASA, USGS, EPA, NPS, USDA, USFWS, U.S. BLM, Esri, NASA, NGA, USGS




# Zeus SWD Line

Distance to High Karst Potential:  
12.8 miles, (67,738 feet) away

## Legend

-  Distance to High Karst Potential
-  HIGH
-  Low
-  Medium
-  Zeus SWD Release Area

 Zeus SWD Release Area

128

128

NEW MEXICO

TEXAS

Google Earth

Released to Imaging: 7/11/2024 2:56:53 PM

Image © 2024 Airbus

8 mi





# Zeus SWD Line

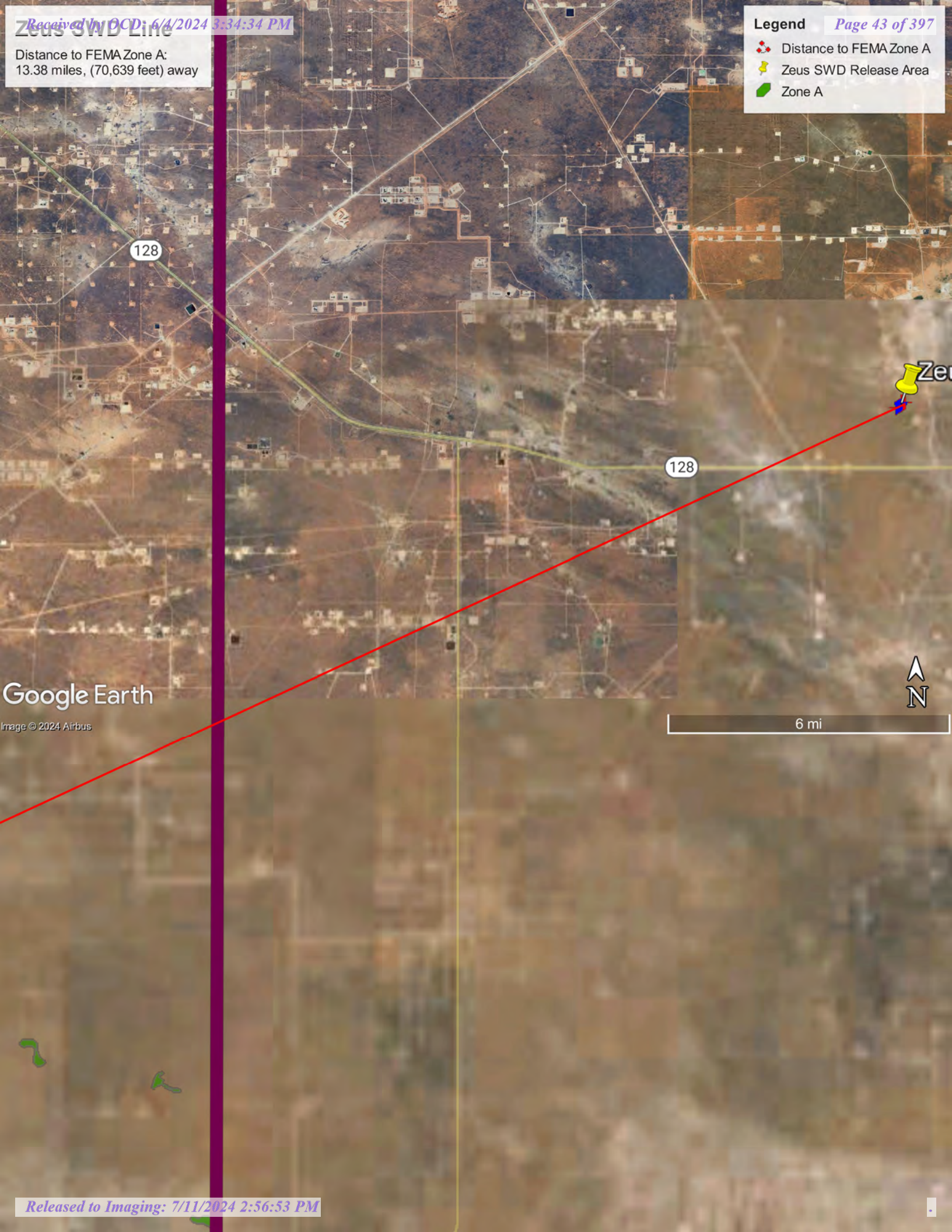
Distance to FEMA Zone A:  
13.38 miles, (70,639 feet) away

Legend

Distance to FEMA Zone A

Zeus SWD Release Area

Zone A



Google Earth

Image © 2024 Airbus





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**

**Tap Rock: Zeus SWD Line**



March 15, 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](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

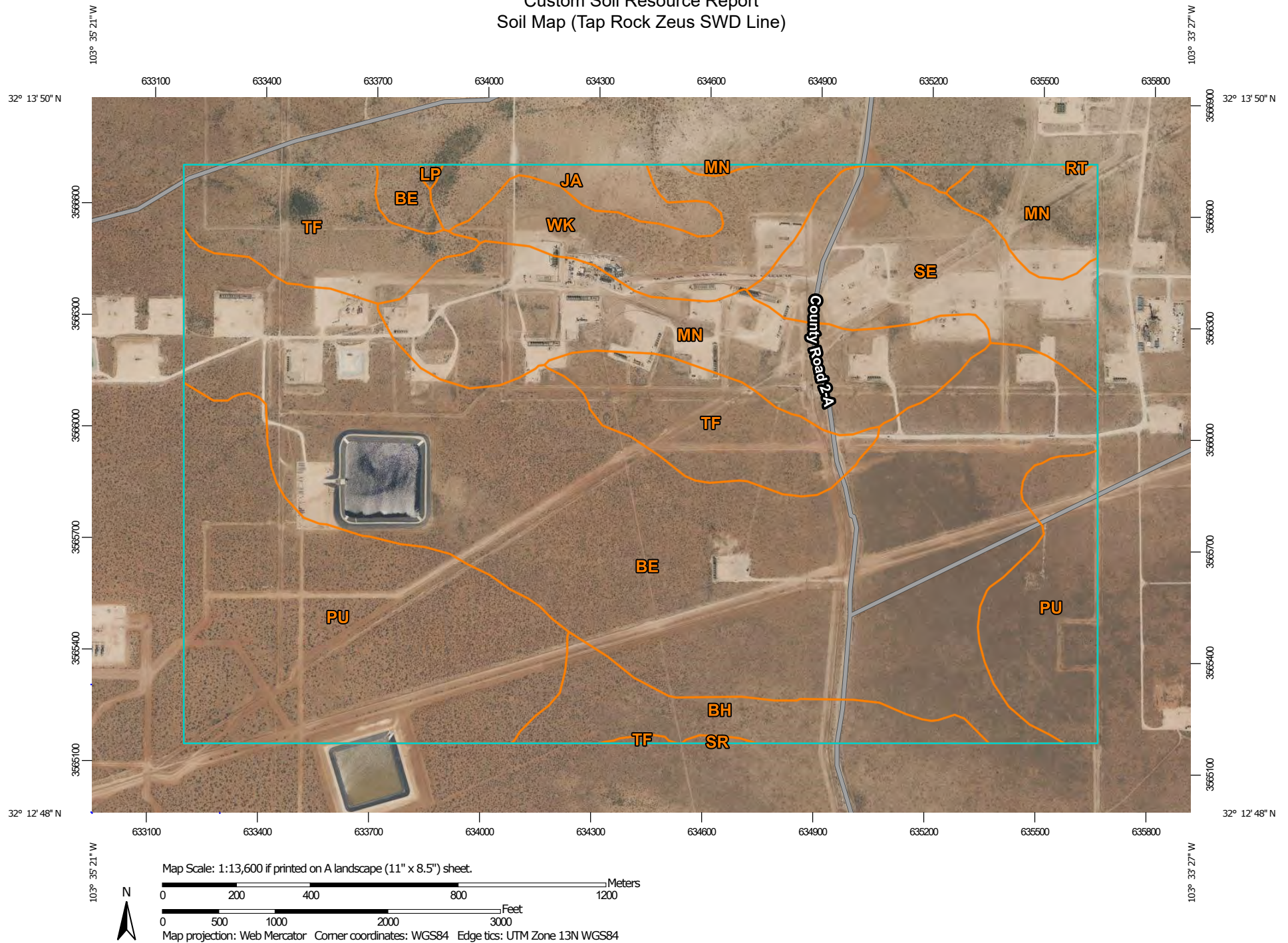
identified each as a specific map unit. Aerial photographs show trees, buildings, fields, roads, and rivers, all of which help in locating boundaries accurately.

## 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 (Tap Rock Zeus SWD Line)



## 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.

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 (Tap Rock Zeus SWD Line)

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
BE	Berino-Cacique loamy fine sands association	363.2	38.1%
BH	Berino-Cacique association, hummocky	37.9	4.0%
JA	Jal association	18.8	2.0%
LP	Largo-Pajarito complex, rarely flooded	0.6	0.1%
MN	Ratliff-Wink fine sandy loams	120.1	12.6%
PU	Pyote and Maljamar fine sands	197.4	20.7%
RT	Reeves-Cottonwood association	0.3	0.0%
SE	Simona fine sandy loam, 0 to 3 percent slopes	69.4	7.3%
SR	Simona-Upton association	0.7	0.1%
TF	Tonuco loamy fine sand, 0 to 3 percent slopes	91.1	9.6%
WK	Wink loamy fine sand	53.0	5.6%
<b>Totals for Area of Interest</b>		<b>952.8</b>	<b>100.0%</b>

## Map Unit Descriptions (Tap Rock Zeus SWD Line)

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

## Custom Soil Resource Report

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

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

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

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

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

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

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

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

An *undifferentiated group* is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion of the soils or miscellaneous areas in a mapped area are not uniform. An area can

## Custom Soil Resource Report

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

**BE—Berino-Cacique loamy fine sands association****Map Unit Setting**

*National map unit symbol:* dmpd  
*Elevation:* 3,000 to 3,900 feet  
*Mean annual precipitation:* 10 to 13 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**

*Berino and similar soils:* 50 percent  
*Cacique and similar soils:* 40 percent  
*Minor components:* 10 percent  
*Estimates are based on observations, descriptions, and transects of the mapunit.*

**Description of Berino****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 over calcareous sandy alluvium derived from sedimentary rock

**Typical profile**

*A - 0 to 6 inches:* loamy fine sand  
*Btk - 6 to 60 inches:* sandy clay loam

**Properties and qualities**

*Slope:* 0 to 3 percent  
*Depth to restrictive feature:* More than 80 inches  
*Drainage class:* Well drained  
*Runoff class:* Low  
*Capacity of the most limiting layer to transmit water (Ksat):* Moderately high to high (0.60 to 2.00 in/hr)  
*Depth to water table:* More than 80 inches  
*Frequency of flooding:* None  
*Frequency of ponding:* None  
*Calcium carbonate, maximum content:* 40 percent  
*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:* Moderate (about 8.7 inches)

**Interpretive groups**

*Land capability classification (irrigated):* None specified  
*Land capability classification (nonirrigated):* 7c  
*Hydrologic Soil Group:* B  
*Ecological site:* R070BD003NM - Loamy Sand  
*Hydric soil rating:* No

## Custom Soil Resource Report

**Description of Cacique****Setting**

*Landform:* Plains

*Landform position (three-dimensional):* Rise

*Down-slope shape:* Linear

*Across-slope shape:* Linear

*Parent material:* Calcareous eolian deposits derived from sedimentary rock

**Typical profile**

*A - 0 to 12 inches:* loamy fine sand

*Bt - 12 to 28 inches:* sandy clay loam

*Bkm - 28 to 38 inches:* cemented material

**Properties and qualities**

*Slope:* 0 to 3 percent

*Depth to restrictive feature:* 20 to 40 inches to petrocalcic

*Drainage class:* Well drained

*Runoff class:* High

*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 3.6 inches)

**Interpretive groups**

*Land capability classification (irrigated):* None specified

*Land capability classification (nonirrigated):* 7c

*Hydrologic Soil Group:* C

*Ecological site:* R070BD004NM - Sandy

*Hydric soil rating:* No

**Minor Components****Maljamar**

*Percent of map unit:* 6 percent

*Ecological site:* R077CY028TX - Limy Upland 16-21" PZ

*Hydric soil rating:* No

**Palomas**

*Percent of map unit:* 4 percent

*Ecological site:* R070BD003NM - Loamy Sand

*Hydric soil rating:* No

## Custom Soil Resource Report

**BH—Berino-Cacique association, hummocky****Map Unit Setting**

*National map unit symbol:* dmpg  
*Elevation:* 3,000 to 4,400 feet  
*Mean annual precipitation:* 10 to 13 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**

*Berino and similar soils:* 50 percent  
*Cacique and similar soils:* 40 percent  
*Minor components:* 10 percent  
*Estimates are based on observations, descriptions, and transects of the mapunit.*

**Description of Berino****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 over calcareous sandy alluvium derived from sedimentary rock

**Typical profile**

*A - 0 to 10 inches:* fine sand  
*Btk - 10 to 60 inches:* sandy clay loam

**Properties and qualities**

*Slope:* 0 to 3 percent  
*Depth to restrictive feature:* More than 80 inches  
*Drainage class:* Well drained  
*Runoff class:* Low  
*Capacity of the most limiting layer to transmit water (Ksat):* Moderately high to high (0.60 to 2.00 in/hr)  
*Depth to water table:* More than 80 inches  
*Frequency of flooding:* None  
*Frequency of ponding:* None  
*Calcium carbonate, maximum content:* 40 percent  
*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:* Moderate (about 8.5 inches)

**Interpretive groups**

*Land capability classification (irrigated):* None specified  
*Land capability classification (nonirrigated):* 7c

## Custom Soil Resource Report

*Hydrologic Soil Group:* B  
*Ecological site:* R070BD003NM - Loamy Sand  
*Hydric soil rating:* No

**Description of Cacique****Setting**

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

**Typical profile**

*A - 0 to 7 inches:* fine sand  
*Bt - 7 to 28 inches:* sandy clay loam  
*Bkm - 28 to 38 inches:* cemented material

**Properties and qualities**

*Slope:* 0 to 3 percent  
*Depth to restrictive feature:* 20 to 40 inches to petrocalcic  
*Drainage class:* Well drained  
*Runoff class:* High  
*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:* 40 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 3.6 inches)

**Interpretive groups**

*Land capability classification (irrigated):* None specified  
*Land capability classification (nonirrigated):* 7c  
*Hydrologic Soil Group:* C  
*Ecological site:* R070BD004NM - Sandy  
*Hydric soil rating:* No

**Minor Components****Kermit**

*Percent of map unit:* 4 percent  
*Ecological site:* R070BD005NM - Deep Sand  
*Hydric soil rating:* No

**Maljamar**

*Percent of map unit:* 3 percent  
*Ecological site:* R077CY028TX - Limy Upland 16-21" PZ  
*Hydric soil rating:* No

**Palomas**

*Percent of map unit:* 2 percent  
*Ecological site:* R070BD003NM - Loamy Sand  
*Hydric soil rating:* No



## Custom Soil Resource Report

**Dune land***Percent of map unit: 1 percent**Hydric soil rating: No***JA—Jal association****Map Unit Setting***National map unit symbol: dmpt**Elevation: 3,000 to 4,000 feet**Mean annual precipitation: 10 to 16 inches**Mean annual air temperature: 58 to 62 degrees F**Frost-free period: 190 to 205 days**Farmland classification: Farmland of statewide importance***Map Unit Composition***Jal and similar soils: 55 percent**Drake and similar soils: 30 percent**Minor components: 15 percent**Estimates are based on observations, descriptions, and transects of the mapunit.***Description of Jal****Setting***Landform: Playa rims**Landform position (two-dimensional): Shoulder**Landform position (three-dimensional): Dip**Down-slope shape: Convex**Across-slope shape: Concave**Parent material: Calcareous alluvium and/or calcareous lacustrine deposits  
derived from sedimentary rock***Typical profile***A - 0 to 12 inches: sandy loam**Bk - 12 to 60 inches: loam***Properties and qualities***Slope: 0 to 3 percent**Depth to restrictive feature: More than 80 inches**Drainage class: Well drained**Runoff class: Low**Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high  
(0.60 to 2.00 in/hr)**Depth to water table: More than 80 inches**Frequency of flooding: None**Frequency of ponding: None**Calcium carbonate, maximum content: 50 percent**Gypsum, maximum content: 1 percent**Maximum salinity: Very slightly saline to slightly saline (2.0 to 4.0 mmhos/cm)**Sodium adsorption ratio, maximum: 2.0*

## Custom Soil Resource Report

*Available water supply, 0 to 60 inches:* Moderate (about 7.2 inches)

**Interpretive groups**

*Land capability classification (irrigated):* 4e

*Land capability classification (nonirrigated):* 7c

*Hydrologic Soil Group:* B

*Ecological site:* R070BC030NM - Limy

*Hydric soil rating:* No

**Description of Drake****Setting**

*Landform:* Playa dunes

*Landform position (two-dimensional):* Backslope, footslope

*Landform position (three-dimensional):* Side slope

*Down-slope shape:* Concave, linear

*Across-slope shape:* Linear

*Parent material:* Calcareous eolian deposits derived from sedimentary rock

**Typical profile**

*A - 0 to 9 inches:* loamy fine sand

*AC - 9 to 30 inches:* fine sandy loam

*C - 30 to 60 inches:* sandy clay loam

**Properties and qualities**

*Slope:* 0 to 3 percent

*Depth to restrictive feature:* More than 80 inches

*Drainage class:* Well drained

*Runoff class:* Very low

*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:* 50 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:* Moderate (about 6.1 inches)

**Interpretive groups**

*Land capability classification (irrigated):* 4e

*Land capability classification (nonirrigated):* 7c

*Hydrologic Soil Group:* A

*Ecological site:* R070BD004NM - Sandy

*Hydric soil rating:* No

**Minor Components****Midessa**

*Percent of map unit:* 5 percent

*Ecological site:* R070BC007NM - Loamy

*Hydric soil rating:* No

**Wink**

*Percent of map unit:* 5 percent

*Ecological site:* R070BD003NM - Loamy Sand

*Hydric soil rating:* No

## Custom Soil Resource Report

**Simona**

*Percent of map unit:* 5 percent

*Ecological site:* R070BD002NM - Shallow Sandy

*Hydric soil rating:* No

**LP—Largo-Pajarito complex, rarely flooded****Map Unit Setting**

*National map unit symbol:* dmq7

*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 200 days

*Farmland classification:* Farmland of statewide importance

**Map Unit Composition**

*Largo and similar soils:* 45 percent

*Pajarito and similar soils:* 40 percent

*Minor components:* 15 percent

*Estimates are based on observations, descriptions, and transects of the mapunit.*

**Description of Largo****Setting**

*Landform:* Alluvial fans, plains

*Landform position (two-dimensional):* Backslope

*Landform position (three-dimensional):* Rise

*Down-slope shape:* Linear

*Across-slope shape:* Linear

*Parent material:* Calcareous loamy alluvium derived from sedimentary rock

**Typical profile**

*A - 0 to 13 inches:* loam

*AC - 13 to 30 inches:* silty clay loam

*C - 30 to 60 inches:* silty clay loam

**Properties and qualities**

*Slope:* 0 to 3 percent

*Depth to restrictive feature:* More than 80 inches

*Drainage class:* Well drained

*Runoff class:* Low

*Capacity of the most limiting layer to transmit water (Ksat):* Moderately high (0.20 to 0.60 in/hr)

*Depth to water table:* More than 80 inches

*Frequency of flooding:* Rare

*Frequency of ponding:* None

*Calcium carbonate, maximum content:* 50 percent

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

*Sodium adsorption ratio, maximum:* 2.0

## Custom Soil Resource Report

*Available water supply, 0 to 60 inches:* High (about 10.6 inches)

**Interpretive groups**

*Land capability classification (irrigated):* None specified

*Land capability classification (nonirrigated):* 7c

*Hydrologic Soil Group:* C

*Ecological site:* R070BC007NM - Loamy

*Hydric soil rating:* No

**Description of Pajarito****Setting**

*Landform:* Plains, alluvial fans

*Landform position (two-dimensional):* Backslope

*Landform position (three-dimensional):* Rise

*Down-slope shape:* Linear

*Across-slope shape:* Linear

*Parent material:* Calcareous sandy alluvium and/or mixed sandy eolian deposits derived from sedimentary rock

**Typical profile**

*A - 0 to 16 inches:* loamy fine sand

*Bw - 16 to 48 inches:* fine sandy loam

*Bk - 48 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:* Very low

*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:* 45 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:* Moderate (about 7.7 inches)

**Interpretive groups**

*Land capability classification (irrigated):* 2e

*Land capability classification (nonirrigated):* 7c

*Hydrologic Soil Group:* A

*Ecological site:* R070BD003NM - Loamy Sand

*Hydric soil rating:* No

**Minor Components****Maljamar**

*Percent of map unit:* 8 percent

*Ecological site:* R070BD003NM - Loamy Sand

*Hydric soil rating:* No

**Palomas**

*Percent of map unit:* 7 percent

*Ecological site:* R070BD003NM - Loamy Sand

*Hydric soil rating:* No

## Custom Soil Resource Report

**MN—Ratliff-Wink fine sandy loams****Map Unit Setting**

*National map unit symbol:* dmqf

*Elevation:* 3,000 to 3,900 feet

*Mean annual precipitation:* 10 to 15 inches

*Mean annual air temperature:* 60 to 62 degrees F

*Frost-free period:* 190 to 205 days

*Farmland classification:* Farmland of statewide importance

**Map Unit Composition**

*Ratliff and similar soils:* 45 percent

*Wink and similar soils:* 40 percent

*Minor components:* 15 percent

*Estimates are based on observations, descriptions, and transects of the mapunit.*

**Description of Ratliff****Setting**

*Landform:* Plains

*Landform position (three-dimensional):* Dip

*Down-slope shape:* Convex

*Across-slope shape:* Convex

*Parent material:* Calcareous alluvium and/or calcareous eolian deposits derived from sedimentary rock

**Typical profile**

*A - 0 to 4 inches:* fine sandy loam

*Bw - 4 to 22 inches:* clay loam

*Bk - 22 to 60 inches:* clay loam

**Properties and qualities**

*Slope:* 0 to 3 percent

*Depth to restrictive feature:* More than 80 inches

*Drainage class:* Well drained

*Runoff class:* Low

*Capacity of the most limiting layer to transmit water (Ksat):* Moderately high to high (0.60 to 2.00 in/hr)

*Depth to water table:* More than 80 inches

*Frequency of flooding:* None

*Frequency of ponding:* None

*Calcium carbonate, maximum content:* 50 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:* Moderate (about 8.1 inches)

**Interpretive groups**

*Land capability classification (irrigated):* 4e



## Custom Soil Resource Report

*Land capability classification (nonirrigated): 6c*

*Hydrologic Soil Group: B*

*Ecological site: R070BC007NM - Loamy*

*Hydric soil rating: No*

**Description of Wink****Setting**

*Landform: Plains*

*Landform position (three-dimensional): Dip*

*Down-slope shape: Convex*

*Across-slope shape: Convex*

*Parent material: Calcareous sandy alluvium and/or calcareous sandy eolian deposits derived from sedimentary rock*

**Typical profile**

*A - 0 to 12 inches: fine sandy loam*

*Bk - 12 to 23 inches: sandy loam*

*BCK - 23 to 60 inches: sandy loam*

**Properties and qualities**

*Slope: 0 to 3 percent*

*Depth to restrictive feature: More than 80 inches*

*Drainage class: Well drained*

*Runoff class: Very low*

*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: 30 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 4.7 inches)*

**Interpretive groups**

*Land capability classification (irrigated): None specified*

*Land capability classification (nonirrigated): 7e*

*Hydrologic Soil Group: A*

*Ecological site: R070BD004NM - Sandy*

*Hydric soil rating: No*

**Minor Components****Kermit**

*Percent of map unit: 6 percent*

*Ecological site: R070BC022NM - Sandhills*

*Hydric soil rating: No*

**Maljamar**

*Percent of map unit: 5 percent*

*Ecological site: R070BD003NM - Loamy Sand*

*Hydric soil rating: No*

**Palomas**

*Percent of map unit: 4 percent*

*Ecological site: R070BD003NM - Loamy Sand*

## Custom Soil Resource Report

Hydric soil rating: No

**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

## Custom Soil Resource Report

*Hydrologic Soil Group:* A  
*Ecological site:* R070BD003NM - Loamy Sand  
*Hydric soil rating:* No

**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

## Custom Soil Resource Report

**RT—Reeves-Cottonwood association****Map Unit Setting**

*National map unit symbol:* dmqz

*Elevation:* 3,500 to 4,100 feet

*Mean annual precipitation:* 12 to 16 inches

*Mean annual air temperature:* 58 to 60 degrees F

*Frost-free period:* 190 to 205 days

*Farmland classification:* Farmland of statewide importance

**Map Unit Composition**

*Reeves and similar soils:* 70 percent

*Cottonwood and similar soils:* 20 percent

*Minor components:* 10 percent

*Estimates are based on observations, descriptions, and transects of the mapunit.*

**Description of Reeves****Setting**

*Landform:* Playa rims, playa slopes

*Landform position (two-dimensional):* Backslope

*Landform position (three-dimensional):* Side slope

*Down-slope shape:* Linear

*Across-slope shape:* Linear

*Parent material:* Alluvium derived from gypsum

**Typical profile**

*A - 0 to 12 inches:* loam

*Bk - 12 to 16 inches:* clay loam

*Bky - 16 to 60 inches:* gypsiferous material

**Properties and qualities**

*Slope:* 0 to 3 percent

*Depth to restrictive feature:* More than 80 inches

*Drainage class:* Well drained

*Runoff class:* Low

*Capacity of the most limiting layer to transmit water (Ksat):* Moderately high to high  
(0.20 to 1.98 in/hr)

*Depth to water table:* More than 80 inches

*Frequency of flooding:* None

*Frequency of ponding:* None

*Calcium carbonate, maximum content:* 25 percent

*Gypsum, maximum content:* 80 percent

*Maximum salinity:* Very slightly saline to strongly saline (2.0 to 16.0 mmhos/cm)

*Sodium adsorption ratio, maximum:* 2.0

*Available water supply, 0 to 60 inches:* Moderate (about 8.5 inches)

**Interpretive groups**

*Land capability classification (irrigated):* 4e

## Custom Soil Resource Report

*Land capability classification (nonirrigated): 7c*

*Hydrologic Soil Group: B*

*Ecological site: R070BC007NM - Loamy*

*Hydric soil rating: No*

**Description of Cottonwood****Setting**

*Landform: Playa rims, playa slopes*

*Landform position (two-dimensional): Backslope*

*Landform position (three-dimensional): Side slope*

*Down-slope shape: Linear*

*Across-slope shape: Linear*

*Parent material: Mixed residuum weathered from gypsum*

**Typical profile**

*A - 0 to 8 inches: loam*

*Cr - 8 to 60 inches: bedrock*

**Properties and qualities**

*Slope: 0 to 3 percent*

*Depth to restrictive feature: 3 to 12 inches to paralithic bedrock*

*Drainage class: Well drained*

*Runoff class: Low*

*Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high  
(0.20 to 2.00 in/hr)*

*Depth to water table: More than 80 inches*

*Frequency of flooding: None*

*Frequency of ponding: None*

*Calcium carbonate, maximum content: 30 percent*

*Gypsum, maximum content: 80 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: Very low (about 1.2 inches)*

**Interpretive groups**

*Land capability classification (irrigated): None specified*

*Land capability classification (nonirrigated): 7s*

*Hydrologic Soil Group: D*

*Ecological site: R070BB006NM - Gyp Upland*

*Hydric soil rating: No*

**Minor Components****Arch**

*Percent of map unit: 5 percent*

*Ecological site: R077CY035TX - Sandy 16-21" PZ*

*Hydric soil rating: No*

**Portales**

*Percent of map unit: 3 percent*

*Ecological site: R077CY028TX - Limy Upland 16-21" PZ*

*Hydric soil rating: No*

**Mansker**

*Percent of map unit: 2 percent*

*Ecological site: R077CY028TX - Limy Upland 16-21" PZ*

*Hydric soil rating: No*



## Custom Soil Resource Report

**SE—Simona fine sandy loam, 0 to 3 percent slopes****Map Unit Setting**

*National map unit symbol:* dmr2  
*Elevation:* 3,000 to 4,200 feet  
*Mean annual precipitation:* 10 to 15 inches  
*Mean annual air temperature:* 58 to 62 degrees F  
*Frost-free period:* 190 to 205 days  
*Farmland classification:* Not prime farmland

**Map Unit Composition**

*Simona and similar soils:* 85 percent  
*Minor components:* 15 percent  
*Estimates are based on observations, descriptions, and transects of the mapunit.*

**Description of Simona****Setting**

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

**Typical profile**

*A - 0 to 8 inches:* fine sandy loam  
*Bk - 8 to 16 inches:* gravelly fine sandy loam  
*Bkm - 16 to 26 inches:* cemented material

**Properties and qualities**

*Slope:* 0 to 3 percent  
*Depth to restrictive feature:* 7 to 20 inches to petrocalcic  
*Drainage class:* Well drained  
*Runoff class:* Very high  
*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:* 35 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:* Very low (about 2.0 inches)

**Interpretive groups**

*Land capability classification (irrigated):* 6s  
*Land capability classification (nonirrigated):* 7s  
*Hydrologic Soil Group:* D

## Custom Soil Resource Report

*Ecological site:* R070BD002NM - Shallow Sandy

*Hydric soil rating:* No

**Minor Components****Kimbrough**

*Percent of map unit:* 8 percent

*Ecological site:* R077CY037TX - Very Shallow 16-21" PZ

*Hydric soil rating:* No

**Lea**

*Percent of map unit:* 7 percent

*Ecological site:* R077CY028TX - Limy Upland 16-21" PZ

*Hydric soil rating:* No

**SR—Simona-Upton association****Map Unit Setting**

*National map unit symbol:* dmr3

*Elevation:* 3,000 to 4,400 feet

*Mean annual precipitation:* 10 to 16 inches

*Mean annual air temperature:* 58 to 62 degrees F

*Frost-free period:* 190 to 205 days

*Farmland classification:* Not prime farmland

**Map Unit Composition**

*Simona and similar soils:* 50 percent

*Upton and similar soils:* 35 percent

*Minor components:* 15 percent

*Estimates are based on observations, descriptions, and transects of the mapunit.*

**Description of Simona****Setting**

*Landform:* Ridges

*Landform position (two-dimensional):* Shoulder

*Landform position (three-dimensional):* Rise

*Down-slope shape:* Convex

*Across-slope shape:* Linear

*Parent material:* Calcareous eolian deposits derived from sedimentary rock

**Typical profile**

*A - 0 to 8 inches:* gravelly fine sandy loam

*Bk - 8 to 16 inches:* fine sandy loam

*Bkm - 16 to 26 inches:* cemented material

**Properties and qualities**

*Slope:* 0 to 3 percent

*Depth to restrictive feature:* 7 to 20 inches to petrocalcic

*Drainage class:* Well drained

*Runoff class:* Very high

## Custom Soil Resource Report

*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:* 50 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:* Very low (about 1.9 inches)

**Interpretive groups**

*Land capability classification (irrigated):* None specified  
*Land capability classification (nonirrigated):* 7s  
*Hydrologic Soil Group:* D  
*Ecological site:* R070BD002NM - Shallow Sandy  
*Hydric soil rating:* No

**Description of Upton****Setting**

*Landform:* Ridges  
*Landform position (two-dimensional):* Shoulder  
*Landform position (three-dimensional):* Rise  
*Down-slope shape:* Convex  
*Across-slope shape:* Linear  
*Parent material:* Calcareous eolian deposits derived from sedimentary rock

**Typical profile**

*A - 0 to 8 inches:* gravelly loam  
*Bkm - 8 to 18 inches:* cemented material  
*BCK - 18 to 60 inches:* very gravelly loam

**Properties and qualities**

*Slope:* 0 to 3 percent  
*Depth to restrictive feature:* 7 to 20 inches to petrocalcic  
*Drainage class:* Well drained  
*Runoff class:* Medium  
*Capacity of the most limiting layer to transmit water (Ksat):* Low to moderately high (0.01 to 0.60 in/hr)  
*Depth to water table:* More than 80 inches  
*Frequency of flooding:* None  
*Frequency of ponding:* None  
*Calcium carbonate, maximum content:* 75 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:* Very low (about 0.9 inches)

**Interpretive groups**

*Land capability classification (irrigated):* 6e  
*Land capability classification (nonirrigated):* 7s  
*Hydrologic Soil Group:* D  
*Ecological site:* R070BC025NM - Shallow  
*Hydric soil rating:* No

## Custom Soil Resource Report

**Minor Components****Kimbrough**

*Percent of map unit:* 6 percent

*Ecological site:* R077CY037TX - Very Shallow 16-21" PZ

*Hydric soil rating:* No

**Stegall**

*Percent of map unit:* 5 percent

*Ecological site:* R077CY028TX - Limy Upland 16-21" PZ

*Hydric soil rating:* No

**Slaughter**

*Percent of map unit:* 4 percent

*Ecological site:* R077CY028TX - Limy Upland 16-21" PZ

*Hydric soil rating:* No

**TF—Tonuco loamy fine sand, 0 to 3 percent slopes****Map Unit Setting**

*National map unit symbol:* 2tw3c

*Elevation:* 3,280 to 4,460 feet

*Mean annual precipitation:* 10 to 16 inches

*Mean annual air temperature:* 59 to 64 degrees F

*Frost-free period:* 180 to 220 days

*Farmland classification:* Not prime farmland

**Map Unit Composition**

*Tonuco and similar soils:* 70 percent

*Minor components:* 30 percent

*Estimates are based on observations, descriptions, and transects of the mapunit.*

**Description of Tonuco****Setting**

*Landform:* Ridges, plains

*Landform position (two-dimensional):* Shoulder

*Landform position (three-dimensional):* Rise

*Down-slope shape:* Convex, linear

*Across-slope shape:* Linear

*Parent material:* Sandy eolian deposits

**Typical profile**

*A - 0 to 12 inches:* loamy fine sand

*Bw - 12 to 17 inches:* loamy sand

*Bkkm - 17 to 39 inches:* cemented material

**Properties and qualities**

*Slope:* 0 to 3 percent

*Depth to restrictive feature:* 12 to 20 inches to petrocalcic

## Custom Soil Resource Report

*Drainage class:* Excessively drained  
*Runoff class:* Very high  
*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:* 2 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:* Very low (about 1.4 inches)

**Interpretive groups**

*Land capability classification (irrigated):* None specified  
*Land capability classification (nonirrigated):* 7e  
*Hydrologic Soil Group:* D  
*Ecological site:* R077DY048TX - Shallow 12-17" PZ  
*Hydric soil rating:* No

**Minor Components****Simona**

*Percent of map unit:* 15 percent  
*Landform:* Ridges, plains  
*Landform position (two-dimensional):* Shoulder  
*Landform position (three-dimensional):* Rise  
*Down-slope shape:* Convex, linear  
*Across-slope shape:* Linear  
*Ecological site:* R070BD002NM - Shallow Sandy  
*Hydric soil rating:* No

**Berino**

*Percent of map unit:* 10 percent  
*Landform:* Ridges, plains  
*Landform position (two-dimensional):* Shoulder  
*Landform position (three-dimensional):* Rise  
*Down-slope shape:* Convex, linear  
*Across-slope shape:* Linear  
*Ecological site:* R070BD003NM - Loamy Sand  
*Hydric soil rating:* No

**Cacique**

*Percent of map unit:* 5 percent  
*Landform:* Ridges, plains  
*Landform position (two-dimensional):* Shoulder  
*Landform position (three-dimensional):* Rise  
*Down-slope shape:* Convex, linear  
*Across-slope shape:* Linear  
*Ecological site:* R070BD004NM - Sandy  
*Hydric soil rating:* No



## Custom Soil Resource Report

**WK—Wink loamy fine sand****Map Unit Setting**

*National map unit symbol:* dmmr  
*Elevation:* 3,000 to 3,400 feet  
*Mean annual precipitation:* 10 to 15 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**

*Wink and similar soils:* 85 percent  
*Minor components:* 15 percent  
*Estimates are based on observations, descriptions, and transects of the mapunit.*

**Description of Wink****Setting**

*Landform:* Depressions  
*Landform position (two-dimensional):* Toeslope  
*Landform position (three-dimensional):* Dip  
*Down-slope shape:* Concave  
*Across-slope shape:* Concave  
*Parent material:* Calcareous sandy alluvium and/or calcareous sandy eolian deposits derived from sedimentary rock

**Typical profile**

*A - 0 to 12 inches:* loamy fine sand  
*Bk - 12 to 23 inches:* sandy loam  
*BCK - 23 to 60 inches:* 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:* 30 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 4.2 inches)

**Interpretive groups**

*Land capability classification (irrigated):* None specified  
*Land capability classification (nonirrigated):* 7e

## Custom Soil Resource Report

*Hydrologic Soil Group:* A  
*Ecological site:* R070BD003NM - Loamy Sand  
*Hydric soil rating:* No

### Minor Components

#### **Berino**

*Percent of map unit:* 5 percent  
*Ecological site:* R070BD003NM - Loamy Sand  
*Hydric soil rating:* No

#### **Midessa**

*Percent of map unit:* 4 percent  
*Ecological site:* R070BC007NM - Loamy  
*Hydric soil rating:* No

#### **Jal**

*Percent of map unit:* 4 percent  
*Ecological site:* R070BC030NM - Limy  
*Hydric soil rating:* No

#### **Cacique**

*Percent of map unit:* 2 percent  
*Ecological site:* R070BD004NM - Sandy  
*Hydric soil rating:* No

# Soil Information for All Uses

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## Ecological Sites

Individual soil map unit components can be correlated to a particular ecological site. The Ecological Site Assessment section includes ecological site descriptions, plant growth curves, state and transition models, and selected National Plants database information.

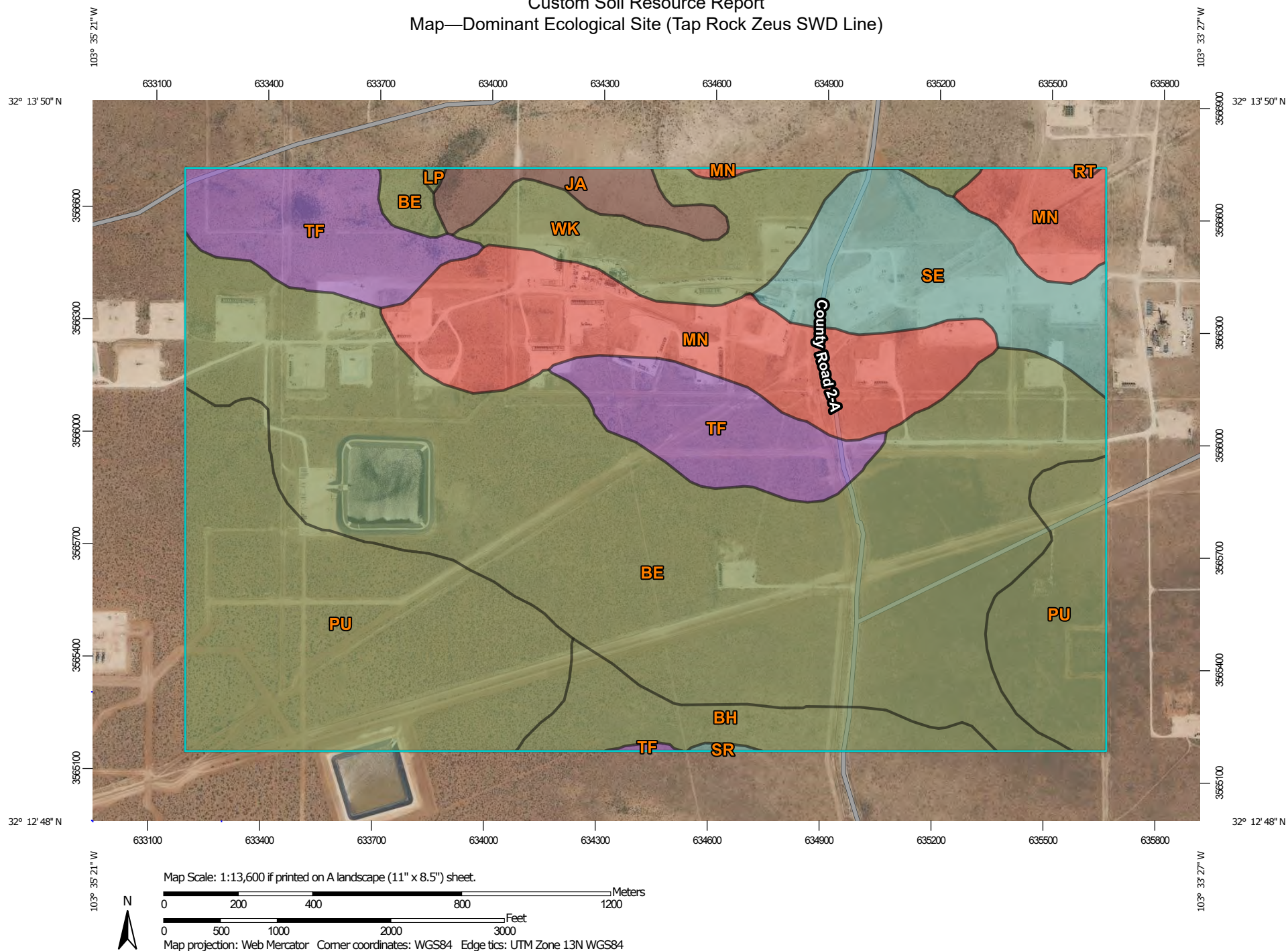
### All Ecological Sites — (Tap Rock Zeus SWD Line)

An "ecological site" is the product of all the environmental factors responsible for its development. It has characteristic soils that have developed over time; a characteristic hydrology, particularly infiltration and runoff, that has developed over time; and a characteristic plant community (kind and amount of vegetation). The vegetation, soils, and hydrology are all interrelated. Each is influenced by the others and influences the development of the others. For example, the hydrology of the site is influenced by development of the soil and plant community. The plant community on an ecological site is typified by an association of species that differs from that of other ecological sites in the kind and/or proportion of species or in total production.

An ecological site name provides a general description of a particular ecological site. For example, "Loamy Upland" is the name of a rangeland ecological site. An "ecological site ID" is the symbol assigned to a particular ecological site.

The map identifies the dominant ecological site for each map unit, aggregated by dominant condition. Other ecological sites may occur within each map unit. Each map unit typically consists of one or more components (soils and/or miscellaneous areas). Each soil component is associated with an ecological site. Miscellaneous areas, such as rock outcrop, sand dunes, and badlands, have little or no soil material and support little or no vegetation and therefore are not linked to an ecological site. The table below the map lists all of the ecological sites for each map unit component in your area of interest.


Custom Soil Resource Report  
Map—Dominant Ecological Site (Tap Rock Zeus SWD Line)



## Custom Soil Resource Report





## MAP LEGEND

## Area of Interest (AOI)







 Area of Interest (AOI)

## Soils







## Soil Rating Polygons

 R070BC007NM  
 R070BC030NM  
 R070BD002NM  
 R070BD003NM  
 R077DY048TX  
 Not rated or not available


## Soil Rating Lines

 R070BC007NM  
 R070BC030NM  
 R070BD002NM  
 R070BD003NM  
 R077DY048TX  
 Not rated or not available






## Soil Rating Points

 R070BC007NM  
 R070BC030NM  
 R070BD002NM  
 R070BD003NM  
 R077DY048TX  
 Not rated or not available


## 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.

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

**Table—Ecological Sites by Map Unit Component (Tap Rock Zeus SWD Line)**

Map unit symbol	Map unit name	Component name (percent)	Ecological site	Acres in AOI	Percent of AOI
BE	Berino-Cacique loamy fine sands association	Berino (50%)	R070BD003NM — Loamy Sand	363.2	38.1%
		Cacique (40%)	R070BD004NM — Sandy		
		Maljamar (6%)	R077CY028TX — Limy Upland 16-21" PZ		
		Palomas (4%)	R070BD003NM — Loamy Sand		
BH	Berino-Cacique association, hummocky	Berino (50%)	R070BD003NM — Loamy Sand	37.9	4.0%
		Cacique (40%)	R070BD004NM — Sandy		
		Kermit (4%)	R070BD005NM — Deep Sand		
		Maljamar (3%)	R077CY028TX — Limy Upland 16-21" PZ		
		Palomas (2%)	R070BD003NM — Loamy Sand		
		Dune land (1%)			
JA	Jal association	Jal (55%)	R070BC030NM — Limy	18.8	2.0%
		Drake (30%)	R070BD004NM — Sandy		
		Midessa (5%)	R070BC007NM — Loamy		
		Simona (5%)	R070BD002NM — Shallow Sandy		
		Wink (5%)	R070BD003NM — Loamy Sand		
LP	Largo-Pajarito complex, rarely flooded	Largo (45%)	R070BC007NM — Loamy	0.6	0.1%
		Pajarito (40%)	R070BD003NM — Loamy Sand		
		Maljamar (8%)	R070BD003NM — Loamy Sand		
		Palomas (7%)	R070BD003NM — Loamy Sand		
MN	Ratliff-Wink fine sandy loams	Ratliff (45%)	R070BC007NM — Loamy	120.1	12.6%
		Wink (40%)	R070BD004NM — Sandy		



## Custom Soil Resource Report

Map unit symbol	Map unit name	Component name (percent)	Ecological site	Acres in AOI	Percent of AOI
		Kermit (6%)	R070BC022NM — Sandhills		
		Maljamar (5%)	R070BD003NM — Loamy Sand		
		Palomas (4%)	R070BD003NM — Loamy Sand		
PU	Pyote and Maljamar fine sands	Pyote (46%)	R070BD003NM — Loamy Sand	197.4	20.7%
		Maljamar (44%)	R070BD003NM — Loamy Sand		
		Kermit (10%)	R070BC022NM — Sandhills		
RT	Reeves-Cottonwood association	Reeves (70%)	R070BC007NM — Loamy	0.3	0.0%
		Cottonwood (20%)	R070BB006NM — Gyp Upland		
		Arch (5%)	R077CY035TX — Sandy 16-21" PZ		
		Portales (3%)	R077CY028TX — Limy Upland 16-21" PZ		
		Mansker (2%)	R077CY028TX — Limy Upland 16-21" PZ		
SE	Simona fine sandy loam, 0 to 3 percent slopes	Simona (85%)	R070BD002NM — Shallow Sandy	69.4	7.3%
		Kimbrough (8%)	R077CY037TX — Very Shallow 16-21" PZ		
		Lea (7%)	R077CY028TX — Limy Upland 16-21" PZ		
SR	Simona-Upton association	Simona (50%)	R070BD002NM — Shallow Sandy	0.7	0.1%
		Upton (35%)	R070BC025NM — Shallow		
		Kimbrough (6%)	R077CY037TX — Very Shallow 16-21" PZ		
		Stegall (5%)	R077CY028TX — Limy Upland 16-21" PZ		
		Slaughter (4%)	R077CY028TX — Limy Upland 16-21" PZ		
TF	Tonuco loamy fine sand, 0 to 3 percent slopes	Tonuco (70%)	R077DY048TX — Shallow 12-17" PZ	91.1	9.6%
		Simona (15%)	R070BD002NM — Shallow Sandy		

## Custom Soil Resource Report

Map unit symbol	Map unit name	Component name (percent)	Ecological site	Acres in AOI	Percent of AOI
		Berino (10%)	R070BD003NM — Loamy Sand		
		Cacique (5%)	R070BD004NM — Sandy		
WK	Wink loamy fine sand	Wink (85%)	R070BD003NM — Loamy Sand	53.0	5.6%
		Berino (5%)	R070BD003NM — Loamy Sand		
		Jal (4%)	R070BC030NM — Limy		
		Midessa (4%)	R070BC007NM — Loamy		
		Cacique (2%)	R070BD004NM — Sandy		
Totals for Area of Interest				952.8	100.0%

## References

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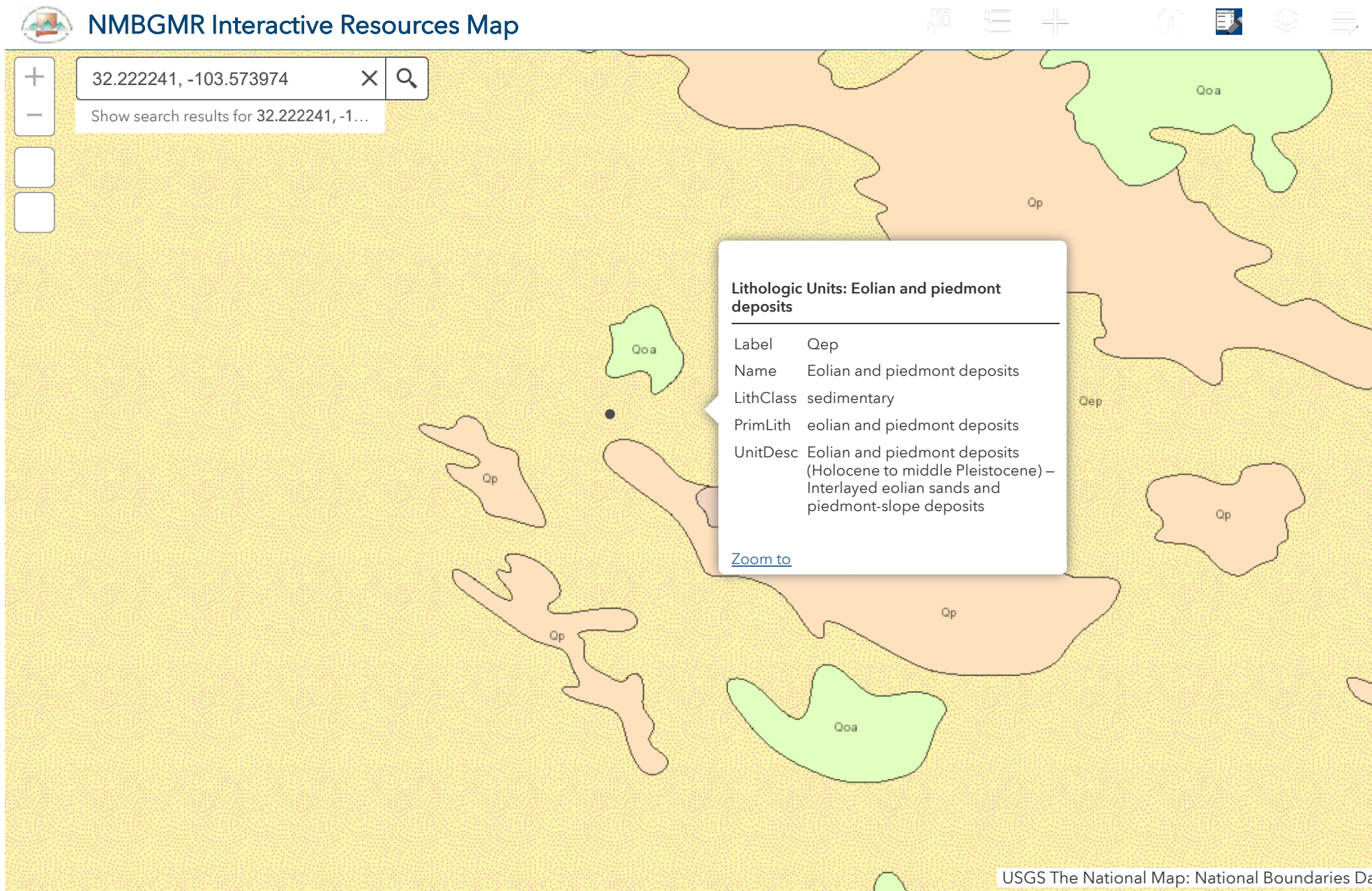
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## Custom Soil Resource Report

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## **APPENDIX C – Daily Field Reports Photographs**



# Daily Site Visit Report



## Site Photos

Viewing Direction: South



Northern excavation ramp was extended 1ft

Viewing Direction: South



Benching of south wall

Viewing Direction: West



West wall of the western corridor was extended 1ft

Viewing Direction: Northeast



Northern wall on the eastern side of the western corridor was extended 1ft

# Daily Site Visit Report



## Site Photos

Viewing Direction: West



Excavation facing north

Viewing Direction: South



Excavation facing south

Viewing Direction: East



Excavation facing east

## **APPENDIX D – Notifications**

**From:** [Velez, Nelson, EMNRD](#)  
**To:** [Chance Dixon](#)  
**Cc:** [Bratcher, Michael, EMNRD](#); [Bill Ramsey](#); [Michael Moffitt](#)  
**Subject:** Re: [EXTERNAL] RE: Tap Rock - Zeus SWD Line  
**Date:** Thursday, May 2, 2024 8:33:15 AM  
**Attachments:** [image001.png](#)  
[Outlook-pcdomdqe.png](#)

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Good morning Chance,

Thanks for the correspondence. The sampling frequency increase from 200 to 400 square feet per one (1) 5-point composite sample is approved.

Please keep a copy of this communication for inclusion within the appropriate report submittal.

Regards,

**Nelson Velez** • Environmental Specialist - Adv  
Environmental Bureau | EMNRD - Oil Conservation Division  
1000 Rio Brazos Road | Aztec, NM 87410  
(505) 469-6146 | [nelson.velez@emnrd.nm.gov](mailto:nelson.velez@emnrd.nm.gov)  
<http://www.emnrd.state.nm.us/OCD/>



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**From:** Chance Dixon <[cdixon@vertex.ca](mailto:cdixon@vertex.ca)>  
**Sent:** Thursday, May 2, 2024 8:19 AM  
**To:** Velez, Nelson, EMNRD <[Nelson.Velez@emnrd.nm.gov](mailto:Nelson.Velez@emnrd.nm.gov)>  
**Cc:** Bratcher, Michael, EMNRD <[mike.bratcher@emnrd.nm.gov](mailto:mike.bratcher@emnrd.nm.gov)>; Bill Ramsey <[Bramsey@taprk.com](mailto:Bramsey@taprk.com)>; Michael Moffitt <[MMoffitt@vertex.ca](mailto:MMoffitt@vertex.ca)>  
**Subject:** RE: [EXTERNAL] RE: Tap Rock - Zeus SWD Line

Good morning all,

We have received the signed final bore logs for the proposed DTGW exploratory borehole on the Jackson 11 Battery that we discussed. We would like to use this data seeking approval for the 400 square-foot sampling variance that we requested in the Remediation Plan. The logs have been signed and submitted to NMOSE by Vision Resources, a licensed driller that was subcontracted through Vertex. The pod number is

**District I**  
1625 N. French Dr., Hobbs, NM 88240  
Phone:(575) 393-6161 Fax:(575) 393-0720  
**District II**  
811 S. First St., Artesia, NM 88210  
Phone:(575) 748-1283 Fax:(575) 748-9720  
**District III**  
1000 Rio Brazos Rd., Aztec, NM 87410  
Phone:(505) 334-6178 Fax:(505) 334-6170  
**District IV**  
1220 S. St Francis Dr., Santa Fe, NM 87505  
Phone:(505) 476-3470 Fax:(505) 476-3462

State of New Mexico  
Energy, Minerals and Natural Resources  
Oil Conservation Division  
1220 S. St Francis Dr.  
Santa Fe, NM 87505

QUESTIONS  
  
Action 339949

QUESTIONS

Operator: TAP ROCK OPERATING, LLC 523 Park Point Drive Golden, CO 80401	OGRID: 372043
	Action Number: 339949
	Action Type: [NOTIFY] Notification Of Sampling (C-141N)

QUESTIONS

Prerequisites	
Incident ID (n#)	nRM2026231125
Incident Name	NRM2026231125 ZEUS SWD LINE @ 0
Incident Type	Produced Water Release
Incident Status	Remediation Closure Report Approved

Location of Release Source	
Site Name	ZEUS SWD LINE
Date Release Discovered	09/03/2020
Surface Owner	State

Sampling Event General Information	
Please answer all the questions in this group.	
What is the sampling surface area in square feet	8,000
What is the estimated number of samples that will be gathered	70
Sampling date pursuant to Subparagraph (a) of Paragraph (1) of Subsection D of 19.15.29.12 NMAC	05/08/2024
Time sampling will commence	08:00 AM
Please provide any information necessary for observers to contact samplers	Vertex will be on site to conduct confirmation sampling. Wyatt Wadleigh can be reached at 832-392-4807.
Please provide any information necessary for navigation to sampling site	32.222118, -103.573972

**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

CONDITIONS  
  
Action 339949

CONDITIONS

Operator: TAP ROCK OPERATING, LLC 523 Park Point Drive Golden, CO 80401	OGRID: 372043
	Action Number: 339949
	Action Type: [NOTIFY] Notification Of Sampling (C-141N)

CONDITIONS

Created By	Condition	Condition Date
vertex1	Failure to notify the OCD of sampling events including any changes in date/time per the requirements of 19.15.29.12.D.(1).(a) NMAC, may result in the remediation closure samples not being accepted.	5/2/2024



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Phone:(505) 476-3470 Fax:(505) 476-3462

**State of New Mexico**  
**Energy, Minerals and Natural Resources**  
**Oil Conservation Division**  
**1220 S. St Francis Dr.**  
**Santa Fe, NM 87505**

QUESTIONS  
  
Action 339950

QUESTIONS

Operator: TAP ROCK OPERATING, LLC 523 Park Point Drive Golden, CO 80401	OGRID: 372043
	Action Number: 339950
	Action Type: [NOTIFY] Notification Of Sampling (C-141N)

QUESTIONS

<b>Prerequisites</b>	
Incident ID (n#)	nRM2026231125
Incident Name	NRM2026231125 ZEUS SWD LINE @ 0
Incident Type	Produced Water Release
Incident Status	Remediation Closure Report Approved

<b>Location of Release Source</b>	
Site Name	ZEUS SWD LINE
Date Release Discovered	09/03/2020
Surface Owner	State

<b>Sampling Event General Information</b>	
Please answer all the questions in this group.	
What is the sampling surface area in square feet	8,000
What is the estimated number of samples that will be gathered	70
Sampling date pursuant to Subparagraph (a) of Paragraph (1) of Subsection D of 19.15.29.12 NMAC	05/09/2024
Time sampling will commence	08:00 AM
Please provide any information necessary for observers to contact samplers	Vertex will be on site to conduct confirmation sampling. Wyatt Wadleigh can be reached at 832-392-4807.
Please provide any information necessary for navigation to sampling site	32.222118, -103.573972

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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

CONDITIONS

Action 339950

CONDITIONS

Operator: TAP ROCK OPERATING, LLC 523 Park Point Drive Golden, CO 80401	OGRID: 372043
	Action Number: 339950
	Action Type: [NOTIFY] Notification Of Sampling (C-141N)

CONDITIONS

Created By	Condition	Condition Date
vertex1	Failure to notify the OCD of sampling events including any changes in date/time per the requirements of 19.15.29.12.D.(1).(a) NMAC, may result in the remediation closure samples not being accepted.	5/2/2024

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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 339952

**QUESTIONS**

Operator: TAP ROCK OPERATING, LLC 523 Park Point Drive Golden, CO 80401	OGRID: 372043
	Action Number: 339952
	Action Type: [NOTIFY] Notification Of Sampling (C-141N)

**QUESTIONS**

Prerequisites	
Incident ID (n#)	nRM2026231125
Incident Name	NRM2026231125 ZEUS SWD LINE @ 0
Incident Type	Produced Water Release
Incident Status	Remediation Closure Report Approved

**Location of Release Source**

Site Name	ZEUS SWD LINE
Date Release Discovered	09/03/2020
Surface Owner	State

**Sampling Event General Information***Please answer all the questions in this group.*

What is the sampling surface area in square feet	8,000
What is the estimated number of samples that will be gathered	70
Sampling date pursuant to Subparagraph (a) of Paragraph (1) of Subsection D of 19.15.29.12 NMAC	05/10/2024
Time sampling will commence	08:00 AM
Please provide any information necessary for observers to contact samplers	Vertex will be on site to conduct confirmation sampling. Wyatt Wadleigh can be reached at 832-392-4807.
Please provide any information necessary for navigation to sampling site	32.222118, -103.573972

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

CONDITIONS  
  
Action 339952

CONDITIONS

Operator: TAP ROCK OPERATING, LLC 523 Park Point Drive Golden, CO 80401	OGRID: 372043
	Action Number: 339952
	Action Type: [NOTIFY] Notification Of Sampling (C-141N)

CONDITIONS

Created By	Condition	Condition Date
vertex1	Failure to notify the OCD of sampling events including any changes in date/time per the requirements of 19.15.29.12.D.(1).(a) NMAC, may result in the remediation closure samples not being accepted.	5/2/2024

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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 342489

QUESTIONS

Operator: TAP ROCK OPERATING, LLC 523 Park Point Drive Golden, CO 80401	OGRID: 372043
	Action Number: 342489
	Action Type: [NOTIFY] Notification Of Sampling (C-141N)

QUESTIONS

Prerequisites	
Incident ID (n#)	nRM2026231125
Incident Name	NRM2026231125 ZEUS SWD LINE @ 0
Incident Type	Produced Water Release
Incident Status	Remediation Closure Report Approved

Location of Release Source	
Site Name	ZEUS SWD LINE
Date Release Discovered	09/03/2020
Surface Owner	State

Sampling Event General Information	
Please answer all the questions in this group.	
What is the sampling surface area in square feet	10,000
What is the estimated number of samples that will be gathered	50
Sampling date pursuant to Subparagraph (a) of Paragraph (1) of Subsection D of 19.15.29.12 NMAC	05/13/2024
Time sampling will commence	09:00 AM
Please provide any information necessary for observers to contact samplers	Vertex will be on site to collect confirmation samples. If there are any questions to concerns, please call 575-988-1472.
Please provide any information necessary for navigation to sampling site	32.222118, -103.573972

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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**

CONDITIONS

Action 342489

CONDITIONS

Operator: TAP ROCK OPERATING, LLC 523 Park Point Drive Golden, CO 80401	OGRID: 372043
	Action Number: 342489
	Action Type: [NOTIFY] Notification Of Sampling (C-141N)

CONDITIONS

Created By	Condition	Condition Date
vertex1	Failure to notify the OCD of sampling events including any changes in date/time per the requirements of 19.15.29.12.D.(1).(a) NMAC, may result in the remediation closure samples not being accepted.	5/9/2024



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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 342496

**QUESTIONS**

Operator: TAP ROCK OPERATING, LLC 523 Park Point Drive Golden, CO 80401	OGRID: 372043
	Action Number: 342496
	Action Type: [NOTIFY] Notification Of Sampling (C-141N)

**QUESTIONS**

Prerequisites	
Incident ID (n#)	nRM2026231125
Incident Name	NRM2026231125 ZEUS SWD LINE @ 0
Incident Type	Produced Water Release
Incident Status	Remediation Closure Report Approved

**Location of Release Source**

Site Name	ZEUS SWD LINE
Date Release Discovered	09/03/2020
Surface Owner	State

**Sampling Event General Information***Please answer all the questions in this group.*

What is the sampling surface area in square feet	10,000
What is the estimated number of samples that will be gathered	50
Sampling date pursuant to Subparagraph (a) of Paragraph (1) of Subsection D of 19.15.29.12 NMAC	05/14/2024
Time sampling will commence	08:00 AM
Please provide any information necessary for observers to contact samplers	Vertex will be on site to collect confirmation samples. If there are any questions to concerns, please call 575-988-1472.
Please provide any information necessary for navigation to sampling site	32.222118, -103.573972

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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

CONDITIONS  
  
Action 342496

CONDITIONS

Operator: TAP ROCK OPERATING, LLC 523 Park Point Drive Golden, CO 80401	OGRID: 372043
	Action Number: 342496
	Action Type: [NOTIFY] Notification Of Sampling (C-141N)

CONDITIONS

Created By	Condition	Condition Date
vertex1	Failure to notify the OCD of sampling events including any changes in date/time per the requirements of 19.15.29.12.D.(1).(a) NMAC, may result in the remediation closure samples not being accepted.	5/9/2024

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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 342497

**QUESTIONS**

Operator: TAP ROCK OPERATING, LLC 523 Park Point Drive Golden, CO 80401	OGRID: 372043
	Action Number: 342497
	Action Type: [NOTIFY] Notification Of Sampling (C-141N)

**QUESTIONS**

Prerequisites	
Incident ID (n#)	nRM2026231125
Incident Name	NRM2026231125 ZEUS SWD LINE @ 0
Incident Type	Produced Water Release
Incident Status	Remediation Closure Report Approved

**Location of Release Source**

Site Name	ZEUS SWD LINE
Date Release Discovered	09/03/2020
Surface Owner	State

**Sampling Event General Information***Please answer all the questions in this group.*

What is the sampling surface area in square feet	10,000
What is the estimated number of samples that will be gathered	50
Sampling date pursuant to Subparagraph (a) of Paragraph (1) of Subsection D of 19.15.29.12 NMAC	05/15/2024
Time sampling will commence	08:00 AM
Please provide any information necessary for observers to contact samplers	Vertex will be on site to collect confirmation samples. If there are any questions to concerns, please call 575-988-1472.
Please provide any information necessary for navigation to sampling site	32.222118, -103.573972

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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**

CONDITIONS  
  
Action 342497

CONDITIONS

Operator: TAP ROCK OPERATING, LLC 523 Park Point Drive Golden, CO 80401	OGRID: 372043
	Action Number: 342497
	Action Type: [NOTIFY] Notification Of Sampling (C-141N)

CONDITIONS

Created By	Condition	Condition Date
vertex1	Failure to notify the OCD of sampling events including any changes in date/time per the requirements of 19.15.29.12.D.(1).(a) NMAC, may result in the remediation closure samples not being accepted.	5/9/2024

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

QUESTIONS

Action 342499

**QUESTIONS**

Operator: TAP ROCK OPERATING, LLC 523 Park Point Drive Golden, CO 80401	OGRID: 372043
	Action Number: 342499
	Action Type: [NOTIFY] Notification Of Sampling (C-141N)

**QUESTIONS**

Prerequisites	
Incident ID (n#)	nRM2026231125
Incident Name	NRM2026231125 ZEUS SWD LINE @ 0
Incident Type	Produced Water Release
Incident Status	Remediation Closure Report Approved

**Location of Release Source**

Site Name	ZEUS SWD LINE
Date Release Discovered	09/03/2020
Surface Owner	State

**Sampling Event General Information***Please answer all the questions in this group.*

What is the sampling surface area in square feet	10,000
What is the estimated number of samples that will be gathered	50
Sampling date pursuant to Subparagraph (a) of Paragraph (1) of Subsection D of 19.15.29.12 NMAC	05/16/2024
Time sampling will commence	08:00 AM
Please provide any information necessary for observers to contact samplers	Vertex will be on site to collect confirmation samples. If there are any questions to concerns, please call 575-988-1472.
Please provide any information necessary for navigation to sampling site	32.222118, -103.573972

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

CONDITIONS  
  
Action 342499

CONDITIONS

Operator: TAP ROCK OPERATING, LLC 523 Park Point Drive Golden, CO 80401	OGRID: 372043
	Action Number: 342499
	Action Type: [NOTIFY] Notification Of Sampling (C-141N)

CONDITIONS

Created By	Condition	Condition Date
vertex1	Failure to notify the OCD of sampling events including any changes in date/time per the requirements of 19.15.29.12.D.(1).(a) NMAC, may result in the remediation closure samples not being accepted.	5/9/2024



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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 342502

QUESTIONS

Operator: TAP ROCK OPERATING, LLC 523 Park Point Drive Golden, CO 80401	OGRID: 372043
	Action Number: 342502
	Action Type: [NOTIFY] Notification Of Sampling (C-141N)

QUESTIONS

Prerequisites	
Incident ID (n#)	nRM2026231125
Incident Name	NRM2026231125 ZEUS SWD LINE @ 0
Incident Type	Produced Water Release
Incident Status	Remediation Closure Report Approved

Location of Release Source	
Site Name	ZEUS SWD LINE
Date Release Discovered	09/03/2020
Surface Owner	State

Sampling Event General Information	
Please answer all the questions in this group.	
What is the sampling surface area in square feet	10,000
What is the estimated number of samples that will be gathered	50
Sampling date pursuant to Subparagraph (a) of Paragraph (1) of Subsection D of 19.15.29.12 NMAC	05/17/2024
Time sampling will commence	08:00 AM
Please provide any information necessary for observers to contact samplers	Vertex will be on site to collect confirmation samples. If there are any questions to concerns, please call 575-988-1472.
Please provide any information necessary for navigation to sampling site	32.222118, -103.573972

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State of New Mexico  
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Oil Conservation Division  
1220 S. St Francis Dr.  
Santa Fe, NM 87505

CONDITIONS  
  
Action 342502

CONDITIONS

Operator: TAP ROCK OPERATING, LLC 523 Park Point Drive Golden, CO 80401	OGRID: 372043
	Action Number: 342502
	Action Type: [NOTIFY] Notification Of Sampling (C-141N)

CONDITIONS

Created By	Condition	Condition Date
vertex1	Failure to notify the OCD of sampling events including any changes in date/time per the requirements of 19.15.29.12.D.(1).(a) NMAC, may result in the remediation closure samples not being accepted.	5/9/2024

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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 344972

**QUESTIONS**

Operator: TAP ROCK OPERATING, LLC 523 Park Point Drive Golden, CO 80401	OGRID: 372043
	Action Number: 344972
	Action Type: [NOTIFY] Notification Of Sampling (C-141N)

**QUESTIONS**

Prerequisites	
Incident ID (n#)	nRM2026231125
Incident Name	NRM2026231125 ZEUS SWD LINE @ 0
Incident Type	Produced Water Release
Incident Status	Remediation Closure Report Approved

**Location of Release Source**

Site Name	ZEUS SWD LINE
Date Release Discovered	09/03/2020
Surface Owner	State

**Sampling Event General Information***Please answer all the questions in this group.*

What is the sampling surface area in square feet	2,000
What is the estimated number of samples that will be gathered	10
Sampling date pursuant to Subparagraph (a) of Paragraph (1) of Subsection D of 19.15.29.12 NMAC	05/20/2024
Time sampling will commence	08:30 AM
Please provide any information necessary for observers to contact samplers	Vertex will be on site to collect confirmation samples. If you have any questions, please call 575-988-1472.
Please provide any information necessary for navigation to sampling site	32.222118, -103.573972

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

CONDITIONS  
  
Action 344972

CONDITIONS

Operator: TAP ROCK OPERATING, LLC 523 Park Point Drive Golden, CO 80401	OGRID: 372043
	Action Number: 344972
	Action Type: [NOTIFY] Notification Of Sampling (C-141N)

CONDITIONS

Created By	Condition	Condition Date
vertex1	Failure to notify the OCD of sampling events including any changes in date/time per the requirements of 19.15.29.12.D.(1).(a) NMAC, may result in the remediation closure samples not being accepted.	5/16/2024



**District I**  
1625 N. French Dr., Hobbs, NM 88240  
Phone:(575) 393-6161 Fax:(575) 393-0720  
**District II**  
811 S. First St., Artesia, NM 88210  
Phone:(575) 748-1283 Fax:(575) 748-9720  
**District III**  
1000 Rio Brazos Rd., Aztec, NM 87410  
Phone:(505) 334-6178 Fax:(505) 334-6170  
**District IV**  
1220 S. St Francis Dr., Santa Fe, NM 87505  
Phone:(505) 476-3470 Fax:(505) 476-3462

State of New Mexico  
Energy, Minerals and Natural Resources  
Oil Conservation Division  
1220 S. St Francis Dr.  
Santa Fe, NM 87505

QUESTIONS  
Action 344977

QUESTIONS

Operator: TAP ROCK OPERATING, LLC 523 Park Point Drive Golden, CO 80401	OGRID: 372043
	Action Number: 344977
	Action Type: [NOTIFY] Notification Of Sampling (C-141N)

QUESTIONS

Prerequisites	
Incident ID (n#)	nRM2026231125
Incident Name	NRM2026231125 ZEUS SWD LINE @ 0
Incident Type	Produced Water Release
Incident Status	Remediation Closure Report Approved

Location of Release Source	
Site Name	ZEUS SWD LINE
Date Release Discovered	09/03/2020
Surface Owner	State

Sampling Event General Information	
Please answer all the questions in this group.	
What is the sampling surface area in square feet	2,000
What is the estimated number of samples that will be gathered	10
Sampling date pursuant to Subparagraph (a) of Paragraph (1) of Subsection D of 19.15.29.12 NMAC	05/21/2024
Time sampling will commence	08:00 AM
Please provide any information necessary for observers to contact samplers	Vertex will be on site to collect confirmation samples. If you have any questions, please call 575-988-1472.
Please provide any information necessary for navigation to sampling site	32.222118, -103.573972

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**Oil Conservation Division**  
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**Santa Fe, NM 87505**

CONDITIONS

Action 344977

CONDITIONS

Operator: TAP ROCK OPERATING, LLC 523 Park Point Drive Golden, CO 80401	OGRID: 372043
	Action Number: 344977
	Action Type: [NOTIFY] Notification Of Sampling (C-141N)

CONDITIONS

Created By	Condition	Condition Date
vertex1	Failure to notify the OCD of sampling events including any changes in date/time per the requirements of 19.15.29.12.D.(1).(a) NMAC, may result in the remediation closure samples not being accepted.	5/16/2024

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**Santa Fe, NM 87505**

QUESTIONS

Action 344979

**QUESTIONS**

Operator: TAP ROCK OPERATING, LLC 523 Park Point Drive Golden, CO 80401	OGRID: 372043
	Action Number: 344979
	Action Type: [NOTIFY] Notification Of Sampling (C-141N)

**QUESTIONS**

Prerequisites	
Incident ID (n#)	nRM2026231125
Incident Name	NRM2026231125 ZEUS SWD LINE @ 0
Incident Type	Produced Water Release
Incident Status	Remediation Closure Report Approved

**Location of Release Source**

Site Name	ZEUS SWD LINE
Date Release Discovered	09/03/2020
Surface Owner	State

**Sampling Event General Information***Please answer all the questions in this group.*

What is the sampling surface area in square feet	2,000
What is the estimated number of samples that will be gathered	10
Sampling date pursuant to Subparagraph (a) of Paragraph (1) of Subsection D of 19.15.29.12 NMAC	05/22/2024
Time sampling will commence	08:00 AM
Please provide any information necessary for observers to contact samplers	Vertex will be on site to collect confirmation samples. If you have any questions, please call 575-988-1472.
Please provide any information necessary for navigation to sampling site	32.222118, -103.573972

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**Energy, Minerals and Natural Resources**  
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**Santa Fe, NM 87505**

CONDITIONS

Action 344979

CONDITIONS

Operator: TAP ROCK OPERATING, LLC 523 Park Point Drive Golden, CO 80401	OGRID: 372043
	Action Number: 344979
	Action Type: [NOTIFY] Notification Of Sampling (C-141N)

CONDITIONS

Created By	Condition	Condition Date
vertex1	Failure to notify the OCD of sampling events including any changes in date/time per the requirements of 19.15.29.12.D.(1).(a) NMAC, may result in the remediation closure samples not being accepted.	5/16/2024

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1220 S. St Francis Dr.  
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QUESTIONS  
  
Action 344980

QUESTIONS

Operator: TAP ROCK OPERATING, LLC 523 Park Point Drive Golden, CO 80401	OGRID: 372043
	Action Number: 344980
	Action Type: [NOTIFY] Notification Of Sampling (C-141N)

QUESTIONS

Prerequisites	
Incident ID (n#)	nRM2026231125
Incident Name	NRM2026231125 ZEUS SWD LINE @ 0
Incident Type	Produced Water Release
Incident Status	Remediation Closure Report Approved

Location of Release Source	
Site Name	ZEUS SWD LINE
Date Release Discovered	09/03/2020
Surface Owner	State

Sampling Event General Information	
Please answer all the questions in this group.	
What is the sampling surface area in square feet	2,000
What is the estimated number of samples that will be gathered	10
Sampling date pursuant to Subparagraph (a) of Paragraph (1) of Subsection D of 19.15.29.12 NMAC	05/23/2024
Time sampling will commence	08:00 AM
Please provide any information necessary for observers to contact samplers	Vertex will be on site to collect confirmation samples. If you have any questions, please call 575-988-1472.
Please provide any information necessary for navigation to sampling site	32.222118, -103.573972



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CONDITIONS  
  
Action 344980

CONDITIONS

Operator: TAP ROCK OPERATING, LLC 523 Park Point Drive Golden, CO 80401	OGRID: 372043
	Action Number: 344980
	Action Type: [NOTIFY] Notification Of Sampling (C-141N)

CONDITIONS

Created By	Condition	Condition Date
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Oil Conservation Division  
1220 S. St Francis Dr.  
Santa Fe, NM 87505

QUESTIONS  
  
Action 344982

QUESTIONS

Operator: TAP ROCK OPERATING, LLC 523 Park Point Drive Golden, CO 80401	OGRID: 372043
	Action Number: 344982
	Action Type: [NOTIFY] Notification Of Sampling (C-141N)

QUESTIONS

Prerequisites	
Incident ID (n#)	nRM2026231125
Incident Name	NRM2026231125 ZEUS SWD LINE @ 0
Incident Type	Produced Water Release
Incident Status	Remediation Closure Report Approved

Location of Release Source	
Site Name	ZEUS SWD LINE
Date Release Discovered	09/03/2020
Surface Owner	State

Sampling Event General Information	
Please answer all the questions in this group.	
What is the sampling surface area in square feet	2,000
What is the estimated number of samples that will be gathered	10
Sampling date pursuant to Subparagraph (a) of Paragraph (1) of Subsection D of 19.15.29.12 NMAC	05/24/2024
Time sampling will commence	08:00 AM
Please provide any information necessary for observers to contact samplers	Vertex will be on site to collect confirmation samples. If you have any questions, please call 575-988-1472.
Please provide any information necessary for navigation to sampling site	32.222118, -103.573972

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**Santa Fe, NM 87505**

CONDITIONS  
  
Action 344982

CONDITIONS

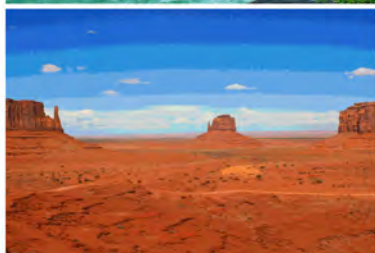
Operator: TAP ROCK OPERATING, LLC 523 Park Point Drive Golden, CO 80401	OGRID: 372043
	Action Number: 344982
	Action Type: [NOTIFY] Notification Of Sampling (C-141N)

CONDITIONS

Created By	Condition	Condition Date
vertex1	Failure to notify the OCD of sampling events including any changes in date/time per the requirements of 19.15.29.12.D.(1).(a) NMAC, may result in the remediation closure samples not being accepted.	5/16/2024

## **APPENDIX E – Laboratory Data Reports and Chain of Custody Forms**

Report to:  
Chance Dixon



# envirotech

*Practical Solutions for a Better Tomorrow*

## Analytical Report

Vertex Resource Services Inc.

Project Name: Zeus SWD Line

Work Order: E404283

Job Number: 24015-0001

Received: 4/29/2024

Revision: 1

Report Reviewed By:

Walter Hinchman  
Laboratory Director  
5/2/24

5796 U.S. Hwy 64  
Farmington, NM 87401

Phone: (505) 632-1881  
Envirotech-inc.com



Envirotech Inc. certifies the test results meet all requirements of TNI unless noted otherwise.  
Statement of Data Authenticity: Envirotech Inc. attests the data reported has not been altered in any way.  
Partial or incomplete reproduction of this report is prohibited, unless approved by Envirotech Inc.  
Envirotech Inc. holds the Utah TNI certification NM00979 for data reported.  
Envirotech Inc. holds the Texas TNI certification T104704557 for data reported.



Date Reported: 5/2/24

Chance Dixon  
3101 Boyd Drive  
Carlsbad, NM 88220



Project Name: Zeus SWD Line  
Workorder: E404283  
Date Received: 4/29/2024 10:30:00AM

Chance Dixon,

Thank you for choosing Envirotech, Inc. as your analytical testing laboratory for the sample(s) received on, 4/29/2024 10:30:00AM, under the Project Name: Zeus SWD Line.

The analytical test results summarized in this report with the Project Name: Zeus SWD Line apply to the individual samples collected, identified and submitted bearing the project name on the enclosed chain-of-custody. Subcontracted sample analyses not conducted by Envirotech, Inc., are attached in full as issued by the subcontract laboratory.

Please review the Chain-of-Custody (COC) and Sample Receipt Checklist (SRC) for any issues regarding sample receipt temperature, containers, preservation etc. To best understand your test results, review the entire report summarizing your sample data and the associated quality control batch data.

All reported data in this analytical report were analyzed according to the referenced method(s) and are in compliance with the latest NELAC/TNI standards, unless otherwise noted. Samples or analytical quality control parameters not meeting specific QC criteria are qualified with a data flag. Data flag definitions are located in the Notes and Definitions section of this analytical report.

If you have any questions concerning this report, please feel free to contact Envirotech, Inc.

Respectfully,

**Walter Hinchman**  
Laboratory Director  
Office: 505-632-1881  
Cell: 775-287-1762  
[whinchman@envirotech-inc.com](mailto:whinchman@envirotech-inc.com)

**Raina Schwanz**  
Laboratory Administrator  
Office: 505-632-1881  
[rainaschwanz@envirotech-inc.com](mailto:rainaschwanz@envirotech-inc.com)

**Alexa Michaels**  
Sample Custody Officer  
Office: 505-632-1881  
[labadmin@envirotech-inc.com](mailto:labadmin@envirotech-inc.com)

Field Offices:

**Southern New Mexico Area**

**Lynn Jarboe**  
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Envirotech Web Address: [www.envirotech-inc.com](http://www.envirotech-inc.com)

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Sample Summary

Vertex Resource Services Inc. 3101 Boyd Drive Carlsbad NM, 88220	Project Name: Zeus SWD Line Project Number: 24015-0001 Project Manager: Chance Dixon	Reported: 05/02/24 15:12
--	--	-----------------------------

Client Sample ID	Lab Sample ID	Matrix	Sampled	Received	Container
Stockpile #1 2.0'	E404283-01A	Soil	04/24/24	04/29/24	Glass Jar, 2 oz.
Stockpile #2 2.0'	E404283-02A	Soil	04/25/24	04/29/24	Glass Jar, 2 oz.
Stockpile #3 2.0'	E404283-03A	Soil	04/25/24	04/29/24	Glass Jar, 2 oz.



Sample Data

Vertex Resource Services Inc. 3101 Boyd Drive Carlsbad NM, 88220	Project Name: Zeus SWD Line Project Number: 24015-0001 Project Manager: Chance Dixon	Reported: 5/2/2024 3:12:31PM
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Stockpile #1 2.0'  
E404283-01

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
<b>Volatile Organics by EPA 8021B</b>	mg/kg	mg/kg	Analyst: BA		Batch: 2418020	
Benzene	ND	0.0250	1	04/30/24	05/01/24	
Ethylbenzene	ND	0.0250	1	04/30/24	05/01/24	
Toluene	ND	0.0250	1	04/30/24	05/01/24	
o-Xylene	ND	0.0250	1	04/30/24	05/01/24	
p,m-Xylene	ND	0.0500	1	04/30/24	05/01/24	
Total Xylenes	ND	0.0250	1	04/30/24	05/01/24	
Surrogate: 4-Bromochlorobenzene-PID	96.3 %	70-130		04/30/24	05/01/24	
<b>Nonhalogenated Organics by EPA 8015D - GRO</b>	mg/kg	mg/kg	Analyst: BA		Batch: 2418020	
Gasoline Range Organics (C6-C10)	ND	20.0	1	04/30/24	05/01/24	
Surrogate: 1-Chloro-4-fluorobenzene-FID	99.2 %	70-130		04/30/24	05/01/24	
<b>Nonhalogenated Organics by EPA 8015D - DRO/ORO</b>	mg/kg	mg/kg	Analyst: KM		Batch: 2418017	
Diesel Range Organics (C10-C28)	ND	25.0	1	04/29/24	04/29/24	
Oil Range Organics (C28-C36)	ND	50.0	1	04/29/24	04/29/24	
Surrogate: n-Nonane	114 %	50-200		04/29/24	04/29/24	
<b>Anions by EPA 300.0/9056A</b>	mg/kg	mg/kg	Analyst: IY		Batch: 2418038	
Chloride	279	20.0	1	04/30/24	04/30/24	



Sample Data

Vertex Resource Services Inc. 3101 Boyd Drive Carlsbad NM, 88220	Project Name: Zeus SWD Line Project Number: 24015-0001 Project Manager: Chance Dixon	Reported: 5/2/2024 3:12:31PM
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Stockpile #2 2.0'  
E404283-02

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
<b>Volatile Organics by EPA 8021B</b>	mg/kg	mg/kg	Analyst: BA		Batch: 2418020	
Benzene	ND	0.0250	1	04/30/24	05/01/24	
Ethylbenzene	ND	0.0250	1	04/30/24	05/01/24	
Toluene	ND	0.0250	1	04/30/24	05/01/24	
o-Xylene	ND	0.0250	1	04/30/24	05/01/24	
p,m-Xylene	ND	0.0500	1	04/30/24	05/01/24	
Total Xylenes	ND	0.0250	1	04/30/24	05/01/24	
Surrogate: 4-Bromochlorobenzene-PID	95.7 %	70-130		04/30/24	05/01/24	
<b>Nonhalogenated Organics by EPA 8015D - GRO</b>	mg/kg	mg/kg	Analyst: BA		Batch: 2418020	
Gasoline Range Organics (C6-C10)	ND	20.0	1	04/30/24	05/01/24	
Surrogate: 1-Chloro-4-fluorobenzene-FID	100 %	70-130		04/30/24	05/01/24	
<b>Nonhalogenated Organics by EPA 8015D - DRO/ORO</b>	mg/kg	mg/kg	Analyst: KM		Batch: 2418017	
Diesel Range Organics (C10-C28)	ND	25.0	1	04/29/24	04/29/24	
Oil Range Organics (C28-C36)	ND	50.0	1	04/29/24	04/29/24	
Surrogate: n-Nonane	114 %	50-200		04/29/24	04/29/24	
<b>Anions by EPA 300.0/9056A</b>	mg/kg	mg/kg	Analyst: IY		Batch: 2418038	
Chloride	69.0	20.0	1	04/30/24	04/30/24	





Sample Data

Vertex Resource Services Inc. 3101 Boyd Drive Carlsbad NM, 88220	Project Name: Zeus SWD Line Project Number: 24015-0001 Project Manager: Chance Dixon	Reported: 5/2/2024 3:12:31PM
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Stockpile #3 2.0'  
E404283-03

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
<b>Volatile Organics by EPA 8021B</b>	mg/kg	mg/kg	Analyst: BA		Batch: 2418020	
Benzene	ND	0.0250	1	04/30/24	05/01/24	
Ethylbenzene	ND	0.0250	1	04/30/24	05/01/24	
Toluene	ND	0.0250	1	04/30/24	05/01/24	
o-Xylene	ND	0.0250	1	04/30/24	05/01/24	
p,m-Xylene	ND	0.0500	1	04/30/24	05/01/24	
Total Xylenes	ND	0.0250	1	04/30/24	05/01/24	
Surrogate: 4-Bromochlorobenzene-PID	92.6 %	70-130		04/30/24	05/01/24	
<b>Nonhalogenated Organics by EPA 8015D - GRO</b>	mg/kg	mg/kg	Analyst: BA		Batch: 2418020	
Gasoline Range Organics (C6-C10)	ND	20.0	1	04/30/24	05/01/24	
Surrogate: 1-Chloro-4-fluorobenzene-FID	97.1 %	70-130		04/30/24	05/01/24	
<b>Nonhalogenated Organics by EPA 8015D - DRO/ORO</b>	mg/kg	mg/kg	Analyst: KM		Batch: 2418017	
Diesel Range Organics (C10-C28)	ND	25.0	1	04/29/24	04/29/24	
Oil Range Organics (C28-C36)	ND	50.0	1	04/29/24	04/29/24	
Surrogate: n-Nonane	114 %	50-200		04/29/24	04/29/24	
<b>Anions by EPA 300.0/9056A</b>	mg/kg	mg/kg	Analyst: IY		Batch: 2418038	
Chloride	ND	20.0	1	04/30/24	04/30/24	



QC Summary Data

Vertex Resource Services Inc. 3101 Boyd Drive Carlsbad NM, 88220	Project Name: Zeus SWD Line Project Number: 24015-0001 Project Manager: Chance Dixon	Reported:  5/2/2024 3:12:31PM
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Volatile Organics by EPA 8021B

Analyst: BA

Analyte	Result mg/kg	Reporting Limit mg/kg	Spike Level mg/kg	Source Result mg/kg	Rec %	Rec Limits %	RPD %	RPD Limit %	Notes
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Blank (2418020-BLK1) Prepared: 04/30/24 Analyzed: 05/01/24

Benzene	ND	0.0250							
Ethylbenzene	ND	0.0250							
Toluene	ND	0.0250							
o-Xylene	ND	0.0250							
p,m-Xylene	ND	0.0500							
Total Xylenes	ND	0.0250							
Surrogate: 4-Bromochlorobenzene-PID	7.57		8.00		94.6	70-130			

LCS (2418020-BS1) Prepared: 04/30/24 Analyzed: 05/01/24

Benzene	4.81	0.0250	5.00		96.2	70-130			
Ethylbenzene	4.70	0.0250	5.00		94.0	70-130			
Toluene	4.82	0.0250	5.00		96.4	70-130			
o-Xylene	4.79	0.0250	5.00		95.7	70-130			
p,m-Xylene	9.60	0.0500	10.0		96.0	70-130			
Total Xylenes	14.4	0.0250	15.0		95.9	70-130			
Surrogate: 4-Bromochlorobenzene-PID	7.60		8.00		95.0	70-130			

Matrix Spike (2418020-MS1) Source: E404283-03 Prepared: 04/30/24 Analyzed: 05/01/24

Benzene	4.41	0.0250	5.00	ND	88.3	54-133			
Ethylbenzene	4.31	0.0250	5.00	ND	86.3	61-133			
Toluene	4.42	0.0250	5.00	ND	88.4	61-130			
o-Xylene	4.38	0.0250	5.00	ND	87.5	63-131			
p,m-Xylene	8.83	0.0500	10.0	ND	88.3	63-131			
Total Xylenes	13.2	0.0250	15.0	ND	88.0	63-131			
Surrogate: 4-Bromochlorobenzene-PID	7.60		8.00		95.0	70-130			

Matrix Spike Dup (2418020-MSD1) Source: E404283-03 Prepared: 04/30/24 Analyzed: 05/01/24

Benzene	4.91	0.0250	5.00	ND	98.2	54-133	10.7	20	
Ethylbenzene	4.79	0.0250	5.00	ND	95.8	61-133	10.5	20	
Toluene	4.91	0.0250	5.00	ND	98.2	61-130	10.5	20	
o-Xylene	4.88	0.0250	5.00	ND	97.5	63-131	10.8	20	
p,m-Xylene	9.79	0.0500	10.0	ND	97.9	63-131	10.3	20	
Total Xylenes	14.7	0.0250	15.0	ND	97.8	63-131	10.5	20	
Surrogate: 4-Bromochlorobenzene-PID	7.63		8.00		95.4	70-130			



QC Summary Data

Vertex Resource Services Inc. 3101 Boyd Drive Carlsbad NM, 88220	Project Name: Zeus SWD Line Project Number: 24015-0001 Project Manager: Chance Dixon	Reported:  5/2/2024 3:12:31PM
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Nonhalogenated Organics by EPA 8015D - GRO

Analyst: BA

Analyte	Result mg/kg	Reporting Limit mg/kg	Spike Level mg/kg	Source Result mg/kg	Rec %	Rec Limits %	RPD %	RPD Limit %	Notes
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Blank (2418020-BLK1) Prepared: 04/30/24 Analyzed: 05/01/24

Gasoline Range Organics (C6-C10)	ND	20.0							
Surrogate: 1-Chloro-4-fluorobenzene-FID	7.84		8.00		98.0	70-130			

LCS (2418020-BS2) Prepared: 04/30/24 Analyzed: 05/01/24

Gasoline Range Organics (C6-C10)	48.4	20.0	50.0		96.9	70-130			
Surrogate: 1-Chloro-4-fluorobenzene-FID	7.97		8.00		99.6	70-130			

Matrix Spike (2418020-MS2) Source: E404283-03 Prepared: 04/30/24 Analyzed: 05/01/24

Gasoline Range Organics (C6-C10)	51.8	20.0	50.0	ND	104	70-130			
Surrogate: 1-Chloro-4-fluorobenzene-FID	8.01		8.00		100	70-130			

Matrix Spike Dup (2418020-MSD2) Source: E404283-03 Prepared: 04/30/24 Analyzed: 05/01/24

Gasoline Range Organics (C6-C10)	46.5	20.0	50.0	ND	93.1	70-130	10.6	20	
Surrogate: 1-Chloro-4-fluorobenzene-FID	7.98		8.00		99.8	70-130			



QC Summary Data

Vertex Resource Services Inc. 3101 Boyd Drive Carlsbad NM, 88220	Project Name: Zeus SWD Line Project Number: 24015-0001 Project Manager: Chance Dixon	Reported:  5/2/2024 3:12:31PM
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Nonhalogenated Organics by EPA 8015D - DRO/ORO

Analyst: KM

Analyte	Result mg/kg	Reporting Limit mg/kg	Spike Level mg/kg	Source Result mg/kg	Rec %	Rec Limits %	RPD %	RPD Limit %	Notes
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Blank (2418017-BLK1)					Prepared: 04/29/24 Analyzed: 04/29/24				
Diesel Range Organics (C10-C28)	ND	25.0							
Oil Range Organics (C28-C36)	ND	50.0							
Surrogate: n-Nonane	52.1		50.0		104	50-200			

LCS (2418017-BS1)					Prepared: 04/29/24 Analyzed: 04/29/24				
Diesel Range Organics (C10-C28)	292	25.0	250		117	38-132			
Surrogate: n-Nonane	55.0		50.0		110	50-200			

Matrix Spike (2418017-MS1)					Source: E404266-02		Prepared: 04/29/24 Analyzed: 04/29/24		
Diesel Range Organics (C10-C28)	272	25.0	250	ND	109	38-132			
Surrogate: n-Nonane	51.8		50.0		104	50-200			

Matrix Spike Dup (2418017-MSD1)					Source: E404266-02		Prepared: 04/29/24 Analyzed: 04/29/24		
Diesel Range Organics (C10-C28)	271	25.0	250	ND	108	38-132	0.169	20	
Surrogate: n-Nonane	51.9		50.0		104	50-200			



QC Summary Data

Vertex Resource Services Inc. 3101 Boyd Drive Carlsbad NM, 88220	Project Name: Zeus SWD Line Project Number: 24015-0001 Project Manager: Chance Dixon	Reported:  5/2/2024 3:12:31PM
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Anions by EPA 300.0/9056A

Analyst: IY

Analyte	Result mg/kg	Reporting Limit mg/kg	Spike Level mg/kg	Source Result mg/kg	Rec %	Rec Limits %	RPD %	RPD Limit %	Notes
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Blank (2418038-BLK1)					Prepared: 04/30/24 Analyzed: 04/30/24				
Chloride	ND	20.0							
LCS (2418038-BS1)					Prepared: 04/30/24 Analyzed: 04/30/24				
Chloride	249	20.0	250		99.5	90-110			
Matrix Spike (2418038-MS1)					Source: E404287-01		Prepared: 04/30/24 Analyzed: 04/30/24		
Chloride	690	20.0	250	442	99.2	80-120			
Matrix Spike Dup (2418038-MSD1)					Source: E404287-01		Prepared: 04/30/24 Analyzed: 04/30/24		
Chloride	713	20.0	250	442	108	80-120	3.25	20	

QC Summary Report Comment:  
Calculations are based off of the raw (non-rounded) data. However, for reporting purposes all QC data is rounded to three significant figures.  
Therefore, hand calculated values may differ slightly.



Definitions and Notes

Vertex Resource Services Inc.	Project Name:	Zeus SWD Line	
3101 Boyd Drive	Project Number:	24015-0001	Reported:
Carlsbad NM, 88220	Project Manager:	Chance Dixon	05/02/24 15:12

- ND      Analyte NOT DETECTED at or above the reporting limit
- NR      Not Reported
- RPD      Relative Percent Difference
- DNI      Did Not Ignite
- DNR      Did not react with the addition of acid or base.
- Note (1): Methods marked with \*\* are non-accredited methods.
- Note (2): Soil data is reported on an "as received" weight basis, unless reported otherwise.



## Chain of Custody

Client Information				Invoice Information				Lab Use Only				TAT				State							
Client: Vertex (Bill to Tap Rock)				Company: Tap Rock				Lab WO# E404283				Job Number 24015-0001				1D 2D 3D Std NM CO UT TX							
Project Name: Zeus SWD Line				Address:																			
Project Manager:				City, State, Zip:																			
Address:				Phone:																			
City, State, Zip:				Email:																			
Phone:				Miscellaneous:																			
Email:																							
Sample Information												Analysis and Method								EPA Program			
Time Sampled	Date Sampled	Matrix	No. of Containers	Sample ID		Field	Filter	Lab Number	DRO/DRO by 8015	GRO/DRO by 8015	BTEX by 8021	Chloride 300.0	BGDOC - NM	TCEQ 1005 - TX	RCRA 8 Metals	SDWA	CWA	RCRA					
14:00	4-24-24	Soil	1	Stockpile #1 2.0'				1	X	X	X	X											
14:10	4-25-24	↓	1	Stockpile #2 2.0'				2	↓	↓	↓	↓											
14:00	4-25-24	↓	1	Stockpile #3 2.0'				3	↓	↓	↓	↓											
Additional Instructions: CC: cdixon@vertex.ca on results																							
I, (field sampler), attest to the validity and authenticity of this sample. I am aware that tampering with or intentionally mislabeling the sample location, date or time of collection is considered fraud and may be grounds for legal action.																							
Sampled by: [Signature]																							
Relinquished by: (Signature)				Date		Time		Received by: (Signature)				Date		Time		Samples requiring thermal preservation must be received on ice the day they are sampled or received packed in ice at an avg temp above 0 but less than 6C on subsequent days							
[Signature]				4/26/24		10:27		Michelle Gonzales				4-26-24		10:27		Lab Use Only							
Michelle Gonzales				4-26-24		1700		[Signature]				4-26-24		1700		Received on ice: (Y) N							
[Signature]				4-26-24		2300		[Signature]				4/29/24		10:30		T1 T2 T3							
[Signature]								[Signature]								AVG Temp °C 4							
Sample Matrix: S - Soil, Sd - Solid, Sg - Sludge, A - Aqueous, O - Other												Container Type: g - glass, p - poly/plastic, ag - amber glass, v - VOA											
Note: Samples are discarded 14 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at the client expense. The report for the analysis of the above samples is applicable only to those samples received by the laboratory with this COC. The liability of the laboratory is limited to the amount paid for on the report.																							



**envirotech**

## Envirotech Analytical Laboratory

Printed: 4/30/2024 11:55:51AM

## Sample Receipt Checklist (SRC)

Instructions: Please take note of any NO checkmarks.

If we receive no response concerning these items within 24 hours of the date of this notice, all the samples will be analyzed as requested.

Client:	Vertex Resource Services Inc.	Date Received:	04/29/24 10:30	Work Order ID:	E404283
Phone:	(575) 748-0176	Date Logged In:	04/29/24 10:52	Logged In By:	Alexa Michaels
Email:	cdixon@vertex.ca	Due Date:	05/03/24 17:00 (4 day TAT)		

Chain of Custody (COC)

1. Does the sample ID match the COC? Yes
2. Does the number of samples per sampling site location match the COC? Yes
3. Were samples dropped off by client or carrier? Yes
4. Was the COC complete, i.e., signatures, dates/times, requested analyses? Yes
5. Were all samples received within holding time? Yes

Note: Analysis, such as pH which should be conducted in the field, i.e., 15 minute hold time, are not included in this discussion.

Carrier: CourierComments/Resolution

Project manager was not listed on the COC by client.

Sample Turn Around Time (TAT)

6. Did the COC indicate standard TAT, or Expedited TAT? Yes

Sample Cooler

7. Was a sample cooler received? Yes
8. If yes, was cooler received in good condition? Yes
9. Was the sample(s) received intact, i.e., not broken? Yes
10. Were custody/security seals present? No
11. If yes, were custody/security seals intact? NA
12. Was the sample received on ice? If yes, the recorded temp is 4°C, i.e., 6°±2°C? Yes

Note: Thermal preservation is not required, if samples are received w/i 15 minutes of sampling

13. If no visible ice, record the temperature. Actual sample temperature: 4°C

Sample Container

14. Are aqueous VOC samples present? No
15. Are VOC samples collected in VOA Vials? NA
16. Is the head space less than 6-8 mm (pea sized or less)? NA
17. Was a trip blank (TB) included for VOC analyses? NA
18. Are non-VOC samples collected in the correct containers? Yes
19. Is the appropriate volume/weight or number of sample containers collected? Yes

Field Label

20. Were field sample labels filled out with the minimum information:
  - Sample ID? Yes
  - Date/Time Collected? Yes
  - Collectors name? No

Sample Preservation

21. Does the COC or field labels indicate the samples were preserved? No
22. Are sample(s) correctly preserved? NA
24. Is lab filtration required and/or requested for dissolved metals? No

Multiphase Sample Matrix

26. Does the sample have more than one phase, i.e., multiphase? No
27. If yes, does the COC specify which phase(s) is to be analyzed? NA

Subcontract Laboratory

28. Are samples required to get sent to a subcontract laboratory? No
29. Was a subcontract laboratory specified by the client and if so who? NA Subcontract Lab: NA

Client Instruction

Signature of client authorizing changes to the COC or sample disposition.

Date



envirotech Inc.

Report to:  
Chance Dixon



# envirotech

*Practical Solutions for a Better Tomorrow*

## Analytical Report

Vertex Resource Services Inc.

Project Name: Zeus SWD Line

Work Order: E405024

Job Number: 24015-0001

Received: 5/3/2024

Revision: 1

Report Reviewed By:

Walter Hinchman  
Laboratory Director  
5/8/24

5796 U.S. Hwy 64  
Farmington, NM 87401

Phone: (505) 632-1881  
Envirotech-inc.com



Envirotech Inc. certifies the test results meet all requirements of TNI unless noted otherwise.  
Statement of Data Authenticity: Envirotech Inc. attests the data reported has not been altered in any way.  
Partial or incomplete reproduction of this report is prohibited, unless approved by Envirotech Inc.  
Envirotech Inc. holds the Utah TNI certification NM00979 for data reported.  
Envirotech Inc. holds the Texas TNI certification T104704557 for data reported.

Date Reported: 5/8/24

Chance Dixon  
3101 Boyd Drive  
Carlsbad, NM 88220



Project Name: Zeus SWD Line  
Workorder: E405024  
Date Received: 5/3/2024 5:00:00AM

Chance Dixon,

Thank you for choosing Envirotech, Inc. as your analytical testing laboratory for the sample(s) received on, 5/3/2024 5:00:00AM, under the Project Name: Zeus SWD Line.

The analytical test results summarized in this report with the Project Name: Zeus SWD Line apply to the individual samples collected, identified and submitted bearing the project name on the enclosed chain-of-custody. Subcontracted sample analyses not conducted by Envirotech, Inc., are attached in full as issued by the subcontract laboratory.

Please review the Chain-of-Custody (COC) and Sample Receipt Checklist (SRC) for any issues regarding sample receipt temperature, containers, preservation etc. To best understand your test results, review the entire report summarizing your sample data and the associated quality control batch data.

All reported data in this analytical report were analyzed according to the referenced method(s) and are in compliance with the latest NELAC/TNI standards, unless otherwise noted. Samples or analytical quality control parameters not meeting specific QC criteria are qualified with a data flag. Data flag definitions are located in the Notes and Definitions section of this analytical report.

If you have any questions concerning this report, please feel free to contact Envirotech, Inc.

Respectfully,

**Walter Hinchman**  
Laboratory Director  
Office: 505-632-1881  
Cell: 775-287-1762  
[whinchman@envirotech-inc.com](mailto:whinchman@envirotech-inc.com)

**Raina Schwanz**  
Laboratory Administrator  
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**Alexa Michaels**  
Sample Custody Officer  
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**Southern New Mexico Area**

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Envirotech Web Address: [www.envirotech-inc.com](http://www.envirotech-inc.com)



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Sample Summary

Vertex Resource Services Inc. 3101 Boyd Drive Carlsbad NM, 88220	Project Name: Zeus SWD Line Project Number: 24015-0001 Project Manager: Chance Dixon	Reported: 05/08/24 10:32
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Client Sample ID	Lab Sample ID	Matrix	Sampled	Received	Container
Stockpile #4 2.0'	E405024-01A	Soil	05/01/24	05/03/24	Glass Jar, 2 oz.
Stockpile #5 2.0'	E405024-02A	Soil	05/01/24	05/03/24	Glass Jar, 2 oz.
Stockpile #6 2.0'	E405024-03A	Soil	05/01/24	05/03/24	Glass Jar, 2 oz.
Stockpile #7 2.0'	E405024-04A	Soil	05/01/24	05/03/24	Glass Jar, 2 oz.
Stockpile #8 2.0'	E405024-05A	Soil	05/01/24	05/03/24	Glass Jar, 2 oz.
WS24 01 4.0'	E405024-06A	Soil	05/01/24	05/03/24	Glass Jar, 2 oz.
WS24 02 4.0'	E405024-07A	Soil	05/01/24	05/03/24	Glass Jar, 2 oz.
WS24 03 4.0'	E405024-08A	Soil	05/01/24	05/03/24	Glass Jar, 2 oz.
WS24 04 4.0'	E405024-09A	Soil	05/01/24	05/03/24	Glass Jar, 2 oz.
WS24 05 4.0'	E405024-10A	Soil	05/01/24	05/03/24	Glass Jar, 2 oz.
WS24 06 4.0'	E405024-11A	Soil	05/01/24	05/03/24	Glass Jar, 2 oz.
WS24 07 4.0'	E405024-12A	Soil	05/01/24	05/03/24	Glass Jar, 2 oz.
WS24 08 4.0'	E405024-13A	Soil	05/01/24	05/03/24	Glass Jar, 2 oz.



Sample Data

Vertex Resource Services Inc. 3101 Boyd Drive Carlsbad NM, 88220	Project Name: Zeus SWD Line Project Number: 24015-0001 Project Manager: Chance Dixon	Reported: 5/8/2024 10:32:56AM
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Stockpile #4 2.0'  
E405024-01

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
<b>Volatile Organics by EPA 8021B</b>	mg/kg	mg/kg	Analyst: BA		Batch: 2418117	
Benzene	ND	0.0250	1	05/03/24	05/03/24	
Ethylbenzene	ND	0.0250	1	05/03/24	05/03/24	
Toluene	ND	0.0250	1	05/03/24	05/03/24	
o-Xylene	ND	0.0250	1	05/03/24	05/03/24	
p,m-Xylene	ND	0.0500	1	05/03/24	05/03/24	
Total Xylenes	ND	0.0250	1	05/03/24	05/03/24	
Surrogate: 4-Bromochlorobenzene-PID	91.6 %	70-130		05/03/24	05/03/24	
<b>Nonhalogenated Organics by EPA 8015D - GRO</b>	mg/kg	mg/kg	Analyst: BA		Batch: 2418117	
Gasoline Range Organics (C6-C10)	ND	20.0	1	05/03/24	05/03/24	
Surrogate: 1-Chloro-4-fluorobenzene-FID	99.7 %	70-130		05/03/24	05/03/24	
<b>Nonhalogenated Organics by EPA 8015D - DRO/ORO</b>	mg/kg	mg/kg	Analyst: KM		Batch: 2418122	
Diesel Range Organics (C10-C28)	ND	25.0	1	05/03/24	05/03/24	
Oil Range Organics (C28-C36)	ND	50.0	1	05/03/24	05/03/24	
Surrogate: n-Nonane	104 %	50-200		05/03/24	05/03/24	
<b>Anions by EPA 300.0/9056A</b>	mg/kg	mg/kg	Analyst: IY		Batch: 2418129	
Chloride	27.1	20.0	1	05/03/24	05/05/24	



Sample Data

Vertex Resource Services Inc. 3101 Boyd Drive Carlsbad NM, 88220	Project Name: Zeus SWD Line Project Number: 24015-0001 Project Manager: Chance Dixon	Reported: 5/8/2024 10:32:56AM
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Stockpile #5 2.0'  
E405024-02

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
<b>Volatile Organics by EPA 8021B</b>	mg/kg	mg/kg	Analyst: BA		Batch: 2418117	
Benzene	ND	0.0250	1	05/03/24	05/03/24	
Ethylbenzene	ND	0.0250	1	05/03/24	05/03/24	
Toluene	ND	0.0250	1	05/03/24	05/03/24	
o-Xylene	ND	0.0250	1	05/03/24	05/03/24	
p,m-Xylene	ND	0.0500	1	05/03/24	05/03/24	
Total Xylenes	ND	0.0250	1	05/03/24	05/03/24	
Surrogate: 4-Bromochlorobenzene-PID	92.0 %	70-130		05/03/24	05/03/24	
<b>Nonhalogenated Organics by EPA 8015D - GRO</b>	mg/kg	mg/kg	Analyst: BA		Batch: 2418117	
Gasoline Range Organics (C6-C10)	ND	20.0	1	05/03/24	05/03/24	
Surrogate: 1-Chloro-4-fluorobenzene-FID	100 %	70-130		05/03/24	05/03/24	
<b>Nonhalogenated Organics by EPA 8015D - DRO/ORO</b>	mg/kg	mg/kg	Analyst: KM		Batch: 2418122	
Diesel Range Organics (C10-C28)	ND	25.0	1	05/03/24	05/03/24	
Oil Range Organics (C28-C36)	ND	50.0	1	05/03/24	05/03/24	
Surrogate: n-Nonane	108 %	50-200		05/03/24	05/03/24	
<b>Anions by EPA 300.0/9056A</b>	mg/kg	mg/kg	Analyst: IY		Batch: 2418129	
Chloride	ND	20.0	1	05/03/24	05/05/24	



Sample Data

Vertex Resource Services Inc. 3101 Boyd Drive Carlsbad NM, 88220	Project Name: Zeus SWD Line Project Number: 24015-0001 Project Manager: Chance Dixon	Reported: 5/8/2024 10:32:56AM
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Stockpile #6 2.0'  
E405024-03

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
<b>Volatile Organics by EPA 8021B</b>	mg/kg	mg/kg	Analyst: BA		Batch: 2418117	
Benzene	ND	0.0250	1	05/03/24	05/03/24	
Ethylbenzene	ND	0.0250	1	05/03/24	05/03/24	
Toluene	ND	0.0250	1	05/03/24	05/03/24	
o-Xylene	ND	0.0250	1	05/03/24	05/03/24	
p,m-Xylene	ND	0.0500	1	05/03/24	05/03/24	
Total Xylenes	ND	0.0250	1	05/03/24	05/03/24	
Surrogate: 4-Bromochlorobenzene-PID	91.6 %	70-130		05/03/24	05/03/24	
<b>Nonhalogenated Organics by EPA 8015D - GRO</b>	mg/kg	mg/kg	Analyst: BA		Batch: 2418117	
Gasoline Range Organics (C6-C10)	ND	20.0	1	05/03/24	05/03/24	
Surrogate: 1-Chloro-4-fluorobenzene-FID	101 %	70-130		05/03/24	05/03/24	
<b>Nonhalogenated Organics by EPA 8015D - DRO/ORO</b>	mg/kg	mg/kg	Analyst: KM		Batch: 2418122	
Diesel Range Organics (C10-C28)	ND	25.0	1	05/03/24	05/03/24	
Oil Range Organics (C28-C36)	ND	50.0	1	05/03/24	05/03/24	
Surrogate: n-Nonane	106 %	50-200		05/03/24	05/03/24	
<b>Anions by EPA 300.0/9056A</b>	mg/kg	mg/kg	Analyst: IY		Batch: 2418129	
Chloride	40.0	20.0	1	05/03/24	05/04/24	





Sample Data

Vertex Resource Services Inc. 3101 Boyd Drive Carlsbad NM, 88220	Project Name: Zeus SWD Line Project Number: 24015-0001 Project Manager: Chance Dixon	Reported: 5/8/2024 10:32:56AM
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Stockpile #7 2.0'  
E405024-04

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
<b>Volatile Organics by EPA 8021B</b>	mg/kg	mg/kg	Analyst: BA		Batch: 2418117	
Benzene	ND	0.0250	1	05/03/24	05/03/24	
Ethylbenzene	ND	0.0250	1	05/03/24	05/03/24	
Toluene	ND	0.0250	1	05/03/24	05/03/24	
o-Xylene	ND	0.0250	1	05/03/24	05/03/24	
p,m-Xylene	ND	0.0500	1	05/03/24	05/03/24	
Total Xylenes	ND	0.0250	1	05/03/24	05/03/24	
Surrogate: 4-Bromochlorobenzene-PID	92.7 %	70-130		05/03/24	05/03/24	
<b>Nonhalogenated Organics by EPA 8015D - GRO</b>	mg/kg	mg/kg	Analyst: BA		Batch: 2418117	
Gasoline Range Organics (C6-C10)	ND	20.0	1	05/03/24	05/03/24	
Surrogate: 1-Chloro-4-fluorobenzene-FID	99.3 %	70-130		05/03/24	05/03/24	
<b>Nonhalogenated Organics by EPA 8015D - DRO/ORO</b>	mg/kg	mg/kg	Analyst: KM		Batch: 2418122	
Diesel Range Organics (C10-C28)	ND	25.0	1	05/03/24	05/03/24	
Oil Range Organics (C28-C36)	ND	50.0	1	05/03/24	05/03/24	
Surrogate: n-Nonane	109 %	50-200		05/03/24	05/03/24	
<b>Anions by EPA 300.0/9056A</b>	mg/kg	mg/kg	Analyst: IY		Batch: 2418129	
Chloride	78.6	20.0	1	05/03/24	05/05/24	



Sample Data

Vertex Resource Services Inc. 3101 Boyd Drive Carlsbad NM, 88220	Project Name: Zeus SWD Line Project Number: 24015-0001 Project Manager: Chance Dixon	Reported: 5/8/2024 10:32:56AM
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Stockpile #8 2.0'  
E405024-05

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
<b>Volatile Organics by EPA 8021B</b>	mg/kg	mg/kg	Analyst: BA		Batch: 2418117	
Benzene	ND	0.0250	1	05/03/24	05/03/24	
Ethylbenzene	ND	0.0250	1	05/03/24	05/03/24	
Toluene	ND	0.0250	1	05/03/24	05/03/24	
o-Xylene	ND	0.0250	1	05/03/24	05/03/24	
p,m-Xylene	ND	0.0500	1	05/03/24	05/03/24	
Total Xylenes	ND	0.0250	1	05/03/24	05/03/24	
Surrogate: 4-Bromochlorobenzene-PID	93.5 %	70-130		05/03/24	05/03/24	
<b>Nonhalogenated Organics by EPA 8015D - GRO</b>	mg/kg	mg/kg	Analyst: BA		Batch: 2418117	
Gasoline Range Organics (C6-C10)	ND	20.0	1	05/03/24	05/03/24	
Surrogate: 1-Chloro-4-fluorobenzene-FID	99.6 %	70-130		05/03/24	05/03/24	
<b>Nonhalogenated Organics by EPA 8015D - DRO/ORO</b>	mg/kg	mg/kg	Analyst: KM		Batch: 2418122	
Diesel Range Organics (C10-C28)	ND	25.0	1	05/03/24	05/03/24	
Oil Range Organics (C28-C36)	ND	50.0	1	05/03/24	05/03/24	
Surrogate: n-Nonane	108 %	50-200		05/03/24	05/03/24	
<b>Anions by EPA 300.0/9056A</b>	mg/kg	mg/kg	Analyst: IY		Batch: 2418129	
Chloride	50.1	20.0	1	05/03/24	05/05/24	



Sample Data

Vertex Resource Services Inc. 3101 Boyd Drive Carlsbad NM, 88220	Project Name: Zeus SWD Line Project Number: 24015-0001 Project Manager: Chance Dixon	Reported: 5/8/2024 10:32:56AM
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WS24 07 4.0'  
E405024-12

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
<b>Volatile Organics by EPA 8021B</b>						
	mg/kg	mg/kg	Analyst: BA		Batch: 2418117	
Benzene	ND	0.0250	1	05/03/24	05/04/24	
Ethylbenzene	ND	0.0250	1	05/03/24	05/04/24	
Toluene	ND	0.0250	1	05/03/24	05/04/24	
o-Xylene	ND	0.0250	1	05/03/24	05/04/24	
p,m-Xylene	ND	0.0500	1	05/03/24	05/04/24	
Total Xylenes	ND	0.0250	1	05/03/24	05/04/24	
<i>Surrogate: 4-Bromochlorobenzene-PID</i>						
	94.7 %	70-130		05/03/24	05/04/24	
<b>Nonhalogenated Organics by EPA 8015D - GRO</b>						
	mg/kg	mg/kg	Analyst: BA		Batch: 2418117	
Gasoline Range Organics (C6-C10)	ND	20.0	1	05/03/24	05/04/24	
<i>Surrogate: 1-Chloro-4-fluorobenzene-FID</i>						
	100 %	70-130		05/03/24	05/04/24	
<b>Nonhalogenated Organics by EPA 8015D - DRO/ORO</b>						
	mg/kg	mg/kg	Analyst: KM		Batch: 2418122	
Diesel Range Organics (C10-C28)	ND	25.0	1	05/03/24	05/04/24	
Oil Range Organics (C28-C36)	ND	50.0	1	05/03/24	05/04/24	
<i>Surrogate: n-Nonane</i>						
	119 %	50-200		05/03/24	05/04/24	
<b>Anions by EPA 300.0/9056A</b>						
	mg/kg	mg/kg	Analyst: IY		Batch: 2418129	
Chloride	83.1	20.0	1	05/03/24	05/05/24	



QC Summary Data

Vertex Resource Services Inc. 3101 Boyd Drive Carlsbad NM, 88220	Project Name: Zeus SWD Line Project Number: 24015-0001 Project Manager: Chance Dixon	Reported:  5/8/2024 10:32:56AM
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Volatile Organics by EPA 8021B

Analyst: BA

Analyte	Result mg/kg	Reporting Limit mg/kg	Spike Level mg/kg	Source Result mg/kg	Rec %	Rec Limits %	RPD %	RPD Limit %	Notes
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Blank (2418117-BLK1) Prepared: 05/03/24 Analyzed: 05/03/24

Benzene	ND	0.0250							
Ethylbenzene	ND	0.0250							
Toluene	ND	0.0250							
o-Xylene	ND	0.0250							
p,m-Xylene	ND	0.0500							
Total Xylenes	ND	0.0250							
Surrogate: 4-Bromochlorobenzene-PID	7.34		8.00		91.8	70-130			

LCS (2418117-BS1) Prepared: 05/03/24 Analyzed: 05/03/24

Benzene	4.44	0.0250	5.00		88.8	70-130			
Ethylbenzene	4.81	0.0250	5.00		96.2	70-130			
Toluene	4.79	0.0250	5.00		95.8	70-130			
o-Xylene	4.89	0.0250	5.00		97.9	70-130			
p,m-Xylene	9.83	0.0500	10.0		98.3	70-130			
Total Xylenes	14.7	0.0250	15.0		98.2	70-130			
Surrogate: 4-Bromochlorobenzene-PID	7.39		8.00		92.3	70-130			

Matrix Spike (2418117-MS1) Source: E405024-03 Prepared: 05/03/24 Analyzed: 05/03/24

Benzene	4.47	0.0250	5.00	ND	89.4	54-133			
Ethylbenzene	4.87	0.0250	5.00	ND	97.4	61-133			
Toluene	4.84	0.0250	5.00	ND	96.7	61-130			
o-Xylene	4.95	0.0250	5.00	ND	99.0	63-131			
p,m-Xylene	9.95	0.0500	10.0	ND	99.5	63-131			
Total Xylenes	14.9	0.0250	15.0	ND	99.4	63-131			
Surrogate: 4-Bromochlorobenzene-PID	7.42		8.00		92.8	70-130			

Matrix Spike Dup (2418117-MSD1) Source: E405024-03 Prepared: 05/03/24 Analyzed: 05/03/24

Benzene	4.46	0.0250	5.00	ND	89.1	54-133	0.356	20	
Ethylbenzene	4.88	0.0250	5.00	ND	97.6	61-133	0.219	20	
Toluene	4.83	0.0250	5.00	ND	96.7	61-130	0.0217	20	
o-Xylene	4.96	0.0250	5.00	ND	99.1	63-131	0.111	20	
p,m-Xylene	9.96	0.0500	10.0	ND	99.6	63-131	0.0894	20	
Total Xylenes	14.9	0.0250	15.0	ND	99.5	63-131	0.0966	20	
Surrogate: 4-Bromochlorobenzene-PID	7.39		8.00		92.4	70-130			



QC Summary Data

Vertex Resource Services Inc. 3101 Boyd Drive Carlsbad NM, 88220	Project Name: Zeus SWD Line Project Number: 24015-0001 Project Manager: Chance Dixon	Reported:  5/8/2024 10:32:56AM
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Nonhalogenated Organics by EPA 8015D - GRO

Analyst: BA

Analyte	Result mg/kg	Reporting Limit mg/kg	Spike Level mg/kg	Source Result mg/kg	Rec %	Rec Limits %	RPD %	RPD Limit %	Notes
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Blank (2418117-BLK1) Prepared: 05/03/24 Analyzed: 05/03/24

Gasoline Range Organics (C6-C10)	ND	20.0							
Surrogate: 1-Chloro-4-fluorobenzene-FID	7.98		8.00		99.8	70-130			

LCS (2418117-BS2) Prepared: 05/03/24 Analyzed: 05/03/24

Gasoline Range Organics (C6-C10)	50.9	20.0	50.0		102	70-130			
Surrogate: 1-Chloro-4-fluorobenzene-FID	8.29		8.00		104	70-130			

Matrix Spike (2418117-MS2) Source: E405024-03 Prepared: 05/03/24 Analyzed: 05/03/24

Gasoline Range Organics (C6-C10)	49.1	20.0	50.0	ND	98.2	70-130			
Surrogate: 1-Chloro-4-fluorobenzene-FID	8.04		8.00		101	70-130			

Matrix Spike Dup (2418117-MSD2) Source: E405024-03 Prepared: 05/03/24 Analyzed: 05/03/24

Gasoline Range Organics (C6-C10)	49.8	20.0	50.0	ND	99.7	70-130	1.47	20	
Surrogate: 1-Chloro-4-fluorobenzene-FID	8.15		8.00		102	70-130			





QC Summary Data

Vertex Resource Services Inc.	Project Name:	Zeus SWD Line	Reported:
3101 Boyd Drive	Project Number:	24015-0001	
Carlsbad NM, 88220	Project Manager:	Chance Dixon	5/8/2024 10:32:56AM

Nonhalogenated Organics by EPA 8015D - DRO/ORO

Analyst: KM

Analyte	Result mg/kg	Reporting Limit mg/kg	Spike Level mg/kg	Source Result mg/kg	Rec %	Rec Limits %	RPD %	RPD Limit %	Notes
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Blank (2418122-BLK1) Prepared: 05/03/24 Analyzed: 05/03/24

Diesel Range Organics (C10-C28)	ND	25.0							
Oil Range Organics (C28-C36)	ND	50.0							
Surrogate: n-Nonane	58.1		50.0		116	50-200			

LCS (2418122-BS1) Prepared: 05/03/24 Analyzed: 05/03/24

Diesel Range Organics (C10-C28)	299	25.0	250		119	38-132			
Surrogate: n-Nonane	55.2		50.0		110	50-200			

Matrix Spike (2418122-MS1) Source: E405024-06 Prepared: 05/03/24 Analyzed: 05/03/24

Diesel Range Organics (C10-C28)	304	25.0	250	ND	122	38-132			
Surrogate: n-Nonane	55.5		50.0		111	50-200			

Matrix Spike Dup (2418122-MSD1) Source: E405024-06 Prepared: 05/03/24 Analyzed: 05/03/24

Diesel Range Organics (C10-C28)	302	25.0	250	ND	121	38-132	0.749	20	
Surrogate: n-Nonane	55.3		50.0		111	50-200			



QC Summary Data

Vertex Resource Services Inc. 3101 Boyd Drive Carlsbad NM, 88220	Project Name: Zeus SWD Line Project Number: 24015-0001 Project Manager: Chance Dixon	Reported:  5/8/2024 10:32:56AM
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Anions by EPA 300.0/9056A

Analyst: IY

Analyte	Result mg/kg	Reporting Limit mg/kg	Spike Level mg/kg	Source Result mg/kg	Rec %	Rec Limits %	RPD %	RPD Limit %	Notes
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Blank (2418129-BLK1)					Prepared: 05/03/24 Analyzed: 05/04/24				
Chloride	ND	20.0							
LCS (2418129-BS1)					Prepared: 05/03/24 Analyzed: 05/04/24				
Chloride	256	20.0	250		103	90-110			
Matrix Spike (2418129-MS1)					Source: E405024-03		Prepared: 05/03/24 Analyzed: 05/04/24		
Chloride	301	20.0	250	40.0	104	80-120			
Matrix Spike Dup (2418129-MSD1)					Source: E405024-03		Prepared: 05/03/24 Analyzed: 05/04/24		
Chloride	300	20.0	250	40.0	104	80-120	0.247	20	

QC Summary Report Comment:  
Calculations are based off of the raw (non-rounded) data. However, for reporting purposes all QC data is rounded to three significant figures.  
Therefore, hand calculated values may differ slightly.



Definitions and Notes

Vertex Resource Services Inc.	Project Name:	Zeus SWD Line	
3101 Boyd Drive	Project Number:	24015-0001	Reported:
Carlsbad NM, 88220	Project Manager:	Chance Dixon	05/08/24 10:32

- ND      Analyte NOT DETECTED at or above the reporting limit
  - NR      Not Reported
  - RPD      Relative Percent Difference
  - DNI      Did Not Ignite
  - DNR      Did not react with the addition of acid or base.
- Note (1): Methods marked with \*\* are non-accredited methods.
- Note (2): Soil data is reported on an "as received" weight basis, unless reported otherwise.



## Chain of Custody

Page 1 of 2

Client Information				Invoice Information				Lab Use Only				TAT				State			
Client: <u>Vertex</u>				Company: <u>Tap Rock Resources</u>				Lab WO# <u>E 405024</u>				Job Number <u>24015-0001</u>				<div style="display: flex; justify-content: space-between;"> <div>1D <input checked="" type="checkbox"/></div> <div>2D <input checked="" type="checkbox"/></div> <div>3D <input checked="" type="checkbox"/></div> <div>Std <input checked="" type="checkbox"/></div> </div>			
Project Name: <u>Zeus SHD Line</u>				Address:												<div style="display: flex; justify-content: space-between;"> <div>NM <input type="checkbox"/></div> <div>CO <input type="checkbox"/></div> <div>UT <input type="checkbox"/></div> <div>TX <input type="checkbox"/></div> </div>			
Project Manager: <u>Chance Dixon</u>				City, State, Zip:															
Address:				Phone:															
City, State, Zip:				Email:															
Phone:				Miscellaneous:															
Email:																			

Sample Information								Analysis and Method										EPA Program		
Time Sampled	Date Sampled	Matrix	No. of Containers	Sample ID		Field	Filter	Lab Number	DRO/DRO by 8015	GRO/DRO by 8015	BTEX by 8021	VOC by 8260	Chloride 300.0	BGDOC - NM	TCEQ 1005 - TX	RCRA 8 Metals	SDWA	CWA	RCRA	
0900	5-1-24	Soil	1	Stockpile #4	2.0'			1	X	X	X	X								
0910				Stockpile #5	2.0'			2												
0920				Stockpile #6	2.0'			3												
0930				Stockpile #7	2.0'			4												
0940				Stockpile #8	2.0'			5												
0950				WS24-01	4.0'			6												
1000				WS24-02	4.0'			7												
1010				WS24-03	4.0'			8												
1020				WS24-04	4.0'			9												
1030				WS24-05	4.0'			10												

Additional Instructions: <u>NRM2026231125</u>			
I, (field sampler), attest to the validity and authenticity of this sample. I am aware that tampering with or intentionally mislabeling the sample location, date or time of collection is considered fraud and may be grounds for legal action.			
Sampled by: <u>[Signature]</u>			
Relinquished by: (Signature)	Date	Time	Received by: (Signature)
<u>[Signature]</u>	5/2/24	10:32	<u>Michelle Gonzales</u>
Relinquished by: (Signature)	Date	Time	Received by: (Signature)
<u>Michelle Gonzales</u>	5-2-24	1600	<u>[Signature]</u>
Relinquished by: (Signature)	Date	Time	Received by: (Signature)
<u>[Signature]</u>	5-2-24	2400	<u>Kyleigh R Heller</u>
Relinquished by: (Signature)	Date	Time	Received by: (Signature)

Samples requiring thermal preservation must be received on ice the day they are sampled or received packed in ice at an avg temp above 0 but less than 6C on subsequent days.			
Lab Use Only			
Received on ice: <input checked="" type="checkbox"/> Y / N			
T1	T2	T3	
AVG Temp °C <u>4</u>			

Sample Matrix: S - Soil, Sd - Solid, Sg - Sludge, A - Aqueous, O - Other	Container Type: g - glass, p - poly/plastic, ag - amber glass, v - VOA
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Note: Samples are discarded 14 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at the client expense. The report for the analysis of the above samples is applicable only to those samples received by the laboratory with this COC. The liability of the laboratory is limited to the amount paid for on the report.



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## Chain of Custody

Page 1 of 2

## Client Information

Client: Vertex  
 Project Name: Zeus SMD Line  
 Project Manager: Chance Dixon  
 Address: \_\_\_\_\_  
 City, State, Zip: \_\_\_\_\_  
 Phone: \_\_\_\_\_  
 Email: \_\_\_\_\_

## Invoice Information

Company: Top Rock Resources  
 Address: \_\_\_\_\_  
 City, State, Zip: \_\_\_\_\_  
 Phone: \_\_\_\_\_  
 Email: \_\_\_\_\_  
 Miscellaneous: \_\_\_\_\_

## Lab Use Only

Lab WO# E 405024 Job Number 24015-0001

## TAT

1D ☐ 2D ☒ 3D ☐ Std ☒

## State

NM ☐ CO ☐ UT ☐ TX ☐

## Analysis and Method

DRO/DRO by 8015 ☒ GRO/DRO by 8015 ☒ BTEX by 8021 ☒ VOC by 8260 ☒ Chloride 300.0 ☒ BGDOC - NM ☒ TCEQ 1005 - TX ☒ RCRA 8 Metals ☒

## EPA Program

SDWA ☐ CWA ☐ RCRA ☐  
 Compliance ☐ Y ☐ or ☐ N  
 PWSID # \_\_\_\_\_

## Sample Information

Time Sampled	Date Sampled	Matrix	No. of Containers	Sample ID	Field Filter	Lab Number	DRO/DRO by 8015	GRO/DRO by 8015	BTEX by 8021	VOC by 8260	Chloride 300.0	BGDOC - NM	TCEQ 1005 - TX	RCRA 8 Metals	Remarks
0900	5-1-24	Soil	1	Stockpile #4 2.0'		1	X	X	X		X				Standard TAT *
0910				Stockpile #5 2.0'		2									
0920				Stockpile #6 2.0'		3									
0930				Stockpile #7 2.0'		4									
0940				Stockpile #8 2.0'		5									
0950				WS24-01 4.0'		6									2 D TAT *
1000				WS24-02 4.0'		7									
1010				WS24-03 4.0'		8									
1020				WS24-04 4.0'		9									
1030				WS24-05 4.0'		10									

## Additional Instructions:

NRM2026231125

Samples 6-11 + 13 have been cancelled per client per text message

I, (field sampler), attest to the validity and authenticity of this sample. I am aware that tampering with or intentionally mislabeling the sample location, date or time of collection is considered fraud and may be grounds for legal action.

Sampled by: [Signature]

Relinquished by: (Signature) <u>[Signature]</u>	Date <u>5/2/24</u>	Time <u>10:32</u>	Received by: (Signature) <u>Michelle Gonzalez</u>	Date <u>5-2-24</u>	Time <u>1032</u>	Samples requiring thermal preservation must be received on ice the day they are sampled or received packed in ice at an avg temp above 0 but less than 6C on subsequent days. Lab Use Only Received on ice: <input checked="" type="checkbox"/> Y / N T1 _____ T2 _____ T3 _____ AVG Temp °C <u>4</u>
Relinquished by: (Signature) <u>Michelle Gonzalez</u>	Date <u>5-2-24</u>	Time <u>1600</u>	Received by: (Signature) <u>C.H.</u>	Date <u>5-2-24</u>	Time <u>1730</u>	
Relinquished by: (Signature) <u>C.H.</u>	Date <u>5-2-24</u>	Time <u>2400</u>	Received by: (Signature) <u>Michelle R. Hall</u>	Date <u>5-3-24</u>	Time <u>0500</u>	
Relinquished by: (Signature) _____	Date _____	Time _____	Received by: (Signature) _____	Date _____	Time _____	

Sample Matrix: S - Soil, Sd - Solid, Sg - Sludge, A - Aqueous, O - Other

Container Type: g - glass, p - poly/plastic, ag - amber glass, v - VOA

Note: Samples are discarded 14 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at the client expense. The report for the analysis of the above samples is applicable only to those samples received by the laboratory with this COC. The liability of the laboratory is limited to the amount paid for on the report.



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## Chain of Custody

Client Information						Invoice Information							Lab Use Only				TAT				State							
Client: Vertex						Company: Tap Rock Resources							Lab WO# E405024				Job Number 24015-0001				1D	2D	3D	Std	NM	CO	UT	TX
Project Name: Zeus Shrd Line						Address:																	X					
Project Manager: Chance Dixon						City, State, Zip:																						
Address:						Phone:																						
City, State, Zip:						Email:																						
Phone:						Miscellaneous:																						
Email:																												

[illegible]

**Additional Instructions:**

IS: NRM2026231125

Samples 6-11 + 13 have been cancelled per client per text message

I, (field sampler), attest to the validity and authenticity of this sample. I am aware that tampering with or intentionally mislabeling the sample location, date or time of collection is considered fraud and may be grounds for legal action.

Sampled by:

Relinquished by: (Signature) <i>[Signature]</i>	Date 5/2/24	Time 10:31	Received by: (Signature) <i>Michelle Gonzales</i>	Date 5-2-24	Time 1031	Samples requiring thermal preservation must be received on ice the day they are sampled or received packed in ice at an avg temp above 0 but less than 6C on subsequent days. Lab Use Only Received on ice: <input checked="" type="checkbox"/> Y <input type="checkbox"/> N T1 _____ T2 _____ T3 _____ AVG Temp °C <u>4</u>
Relinquished by: (Signature) <i>Michelle Gonzales</i>	Date 5-2-24	Time 1600	Received by: (Signature) <i>J. M.</i>	Date 5-2-24	Time 1730	
Relinquished by: (Signature) <i>J. M.</i>	Date 5-2-24	Time 2400	Received by: (Signature) <i>Ralph R. Hall</i>	Date 5-3-24	Time 0500	
Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time	
Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time	

Sample Matrix: S - Soil, Sd - Solid, Sg - Sludge, A - Aqueous, O - Other

Container Type: g - glass, p - poly/plastic, ag - amber glass, v - VOA

Note: Samples are discarded 14 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at the client expense. The report for the analysis of the above samples is applicable only to those samples received by the laboratory with this COC. The liability of the laboratory is limited to the amount paid for on the report.





## Envirotech Analytical Laboratory

Printed: 5/3/2024 11:52:56AM

## Sample Receipt Checklist (SRC)

Instructions: Please take note of any NO checkmarks.

If we receive no response concerning these items within 24 hours of the date of this notice, all the samples will be analyzed as requested.

Client:	Vertex Resource Services Inc.	Date Received:	05/03/24 05:00	Work Order ID:	E405024
Phone:	(575) 748-0176	Date Logged In:	05/02/24 16:06	Logged In By:	Angelina Pineda
Email:	cdixon@vertex.ca	Due Date:	05/09/24 17:00 (4 day TAT)		

Chain of Custody (COC)

1. Does the sample ID match the COC? Yes
2. Does the number of samples per sampling site location match the COC? Yes
3. Were samples dropped off by client or carrier? Yes
4. Was the COC complete, i.e., signatures, dates/times, requested analyses? Yes
5. Were all samples received within holding time? Yes

Note: Analysis, such as pH which should be conducted in the field, i.e., 15 minute hold time, are not included in this discussion.

Carrier: CourierSample Turn Around Time (TAT)

6. Did the COC indicate standard TAT, or Expedited TAT? Yes

Sample Cooler

7. Was a sample cooler received? Yes
8. If yes, was cooler received in good condition? Yes
9. Was the sample(s) received intact, i.e., not broken? Yes
10. Were custody/security seals present? No
11. If yes, were custody/security seals intact? NA
12. Was the sample received on ice? If yes, the recorded temp is 4°C, i.e., 6°±2°C Yes

Note: Thermal preservation is not required, if samples are received w/i 15 minutes of sampling

13. If no visible ice, record the temperature. Actual sample temperature: 4°C

Sample Container

14. Are aqueous VOC samples present? No
15. Are VOC samples collected in VOA Vials? NA
16. Is the head space less than 6-8 mm (pea sized or less)? NA
17. Was a trip blank (TB) included for VOC analyses? NA
18. Are non-VOC samples collected in the correct containers? Yes
19. Is the appropriate volume/weight or number of sample containers collected? Yes

Field Label

20. Were field sample labels filled out with the minimum information:
  - Sample ID? Yes
  - Date/Time Collected? Yes
  - Collectors name? Yes

Sample Preservation

21. Does the COC or field labels indicate the samples were preserved? No
22. Are sample(s) correctly preserved? NA
24. Is lab filtration required and/or requested for dissolved metals? No

Multiphase Sample Matrix

26. Does the sample have more than one phase, i.e., multiphase? No
27. If yes, does the COC specify which phase(s) is to be analyzed? NA

Subcontract Laboratory

28. Are samples required to get sent to a subcontract laboratory? No
29. Was a subcontract laboratory specified by the client and if so who? NA Subcontract Lab: NA

Client InstructionComments/Resolution

Samples: 6-11 and 13 have been cancelled per client request per text message. Green copies made with corrections

Signature of client authorizing changes to the COC or sample disposition.

Date



envirotech Inc.

Report to:  
Chance Dixon



# envirotech

*Practical Solutions for a Better Tomorrow*

## Analytical Report

Vertex Resource Services Inc.

Project Name: Zeus SWD Line

Work Order: E405058

Job Number: 24015-0001

Received: 5/4/2024

Revision: 2

Report Reviewed By:

Walter Hinchman  
Laboratory Director  
5/7/24

5796 U.S. Hwy 64  
Farmington, NM 87401

Phone: (505) 632-1881  
Envirotech-inc.com



Envirotech Inc. certifies the test results meet all requirements of TNI unless noted otherwise.  
Statement of Data Authenticity: Envirotech Inc. attests the data reported has not been altered in any way.  
Partial or incomplete reproduction of this report is prohibited, unless approved by Envirotech Inc.  
Envirotech Inc. holds the Utah TNI certification NM00979 for data reported.  
Envirotech Inc. holds the Texas TNI certification T104704557 for data reported.

Date Reported: 5/7/24

Chance Dixon  
3101 Boyd Drive  
Carlsbad, NM 88220



Project Name: Zeus SWD Line  
Workorder: E405058  
Date Received: 5/4/2024 7:15:00AM

Chance Dixon,

Thank you for choosing Envirotech, Inc. as your analytical testing laboratory for the sample(s) received on, 5/4/2024 7:15:00AM, under the Project Name: Zeus SWD Line.

The analytical test results summarized in this report with the Project Name: Zeus SWD Line apply to the individual samples collected, identified and submitted bearing the project name on the enclosed chain-of-custody. Subcontracted sample analyses not conducted by Envirotech, Inc., are attached in full as issued by the subcontract laboratory.

Please review the Chain-of-Custody (COC) and Sample Receipt Checklist (SRC) for any issues regarding sample receipt temperature, containers, preservation etc. To best understand your test results, review the entire report summarizing your sample data and the associated quality control batch data.

All reported data in this analytical report were analyzed according to the referenced method(s) and are in compliance with the latest NELAC/TNI standards, unless otherwise noted. Samples or analytical quality control parameters not meeting specific QC criteria are qualified with a data flag. Data flag definitions are located in the Notes and Definitions section of this analytical report.

If you have any questions concerning this report, please feel free to contact Envirotech, Inc.

Respectfully,

**Walter Hinchman**  
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Sample Summary

Vertex Resource Services Inc. 3101 Boyd Drive Carlsbad NM, 88220	Project Name: Zeus SWD Line Project Number: 24015-0001 Project Manager: Chance Dixon	Reported: 05/07/24 14:11
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Client Sample ID	Lab Sample ID	Matrix	Sampled	Received	Container
WS24-09 4.0'	E405058-01A	Soil	05/02/24	05/04/24	Glass Jar, 2 oz.
WS24-10 4.0'	E405058-02A	Soil	05/02/24	05/04/24	Glass Jar, 2 oz.
WS24-11 4.0'	E405058-03A	Soil	05/02/24	05/04/24	Glass Jar, 2 oz.
WS24-12 4.0'	E405058-04A	Soil	05/02/24	05/04/24	Glass Jar, 2 oz.
WS24-13 4.0'	E405058-05A	Soil	05/02/24	05/04/24	Glass Jar, 2 oz.
WS24-14 4.0'	E405058-06A	Soil	05/02/24	05/04/24	Glass Jar, 2 oz.
WS24-15 4.0'	E405058-07A	Soil	05/02/24	05/04/24	Glass Jar, 2 oz.



Sample Data

Vertex Resource Services Inc. 3101 Boyd Drive Carlsbad NM, 88220	Project Name: Zeus SWD Line Project Number: 24015-0001 Project Manager: Chance Dixon	Reported: 5/7/2024 2:11:50PM
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WS24-09 4.0'

E405058-01

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
<b>Volatile Organic Compounds by EPA 8260B</b>	mg/kg	mg/kg	Analyst: EG		Batch: 2418140	
Benzene	ND	0.0250	1	05/04/24	05/04/24	
Ethylbenzene	ND	0.0250	1	05/04/24	05/04/24	
Toluene	ND	0.0250	1	05/04/24	05/04/24	
o-Xylene	ND	0.0250	1	05/04/24	05/04/24	
p,m-Xylene	ND	0.0500	1	05/04/24	05/04/24	
Total Xylenes	ND	0.0250	1	05/04/24	05/04/24	
Surrogate: Bromofluorobenzene		109 %	70-130	05/04/24	05/04/24	
Surrogate: 1,2-Dichloroethane-d4		99.0 %	70-130	05/04/24	05/04/24	
Surrogate: Toluene-d8		99.4 %	70-130	05/04/24	05/04/24	
<b>Nonhalogenated Organics by EPA 8015D - GRO</b>	mg/kg	mg/kg	Analyst: EG		Batch: 2418140	
Gasoline Range Organics (C6-C10)	ND	20.0	1	05/04/24	05/04/24	
Surrogate: Bromofluorobenzene		109 %	70-130	05/04/24	05/04/24	
Surrogate: 1,2-Dichloroethane-d4		99.0 %	70-130	05/04/24	05/04/24	
Surrogate: Toluene-d8		99.4 %	70-130	05/04/24	05/04/24	
<b>Nonhalogenated Organics by EPA 8015D - DRO/ORO</b>	mg/kg	mg/kg	Analyst: KM		Batch: 2418145	
Diesel Range Organics (C10-C28)	ND	25.0	1	05/04/24	05/04/24	
Oil Range Organics (C28-C36)	ND	50.0	1	05/04/24	05/04/24	
Surrogate: n-Nonane		74.8 %	50-200	05/04/24	05/04/24	
<b>Anions by EPA 300.0/9056A</b>	mg/kg	mg/kg	Analyst: DT		Batch: 2418147	
Chloride	764	20.0	1	05/04/24	05/05/24	



## Sample Data

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

Project Name: Zeus SWD Line  
Project Number: 24015-0001  
Project Manager: Chance Dixon

**Reported:**  
5/7/2024 2:11:50PM

WS24-10 4.0'

E405058-02

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
<b>Volatile Organic Compounds by EPA 8260B</b>						
	mg/kg	mg/kg		Analyst: EG		Batch: 2418140
Benzene	ND	0.0250	1	05/04/24	05/05/24	
Ethylbenzene	ND	0.0250	1	05/04/24	05/05/24	
Toluene	ND	0.0250	1	05/04/24	05/05/24	
o-Xylene	ND	0.0250	1	05/04/24	05/05/24	
p,m-Xylene	ND	0.0500	1	05/04/24	05/05/24	
Total Xylenes	ND	0.0250	1	05/04/24	05/05/24	
Surrogate: Bromofluorobenzene		105 %	70-130	05/04/24	05/05/24	
Surrogate: 1,2-Dichloroethane-d4		100 %	70-130	05/04/24	05/05/24	
Surrogate: Toluene-d8		100 %	70-130	05/04/24	05/05/24	
<b>Nonhalogenated Organics by EPA 8015D - GRO</b>						
	mg/kg	mg/kg		Analyst: EG		Batch: 2418140
Gasoline Range Organics (C6-C10)	ND	20.0	1	05/04/24	05/05/24	
Surrogate: Bromofluorobenzene		105 %	70-130	05/04/24	05/05/24	
Surrogate: 1,2-Dichloroethane-d4		100 %	70-130	05/04/24	05/05/24	
Surrogate: Toluene-d8		100 %	70-130	05/04/24	05/05/24	
<b>Nonhalogenated Organics by EPA 8015D - DRO/ORO</b>						
	mg/kg	mg/kg		Analyst: KM		Batch: 2418145
Diesel Range Organics (C10-C28)	ND	25.0	1	05/04/24	05/04/24	
Oil Range Organics (C28-C36)	ND	50.0	1	05/04/24	05/04/24	
Surrogate: n-Nonane		73.5 %	50-200	05/04/24	05/04/24	
<b>Anions by EPA 300.0/9056A</b>						
	mg/kg	mg/kg		Analyst: DT		Batch: 2418147
Chloride	308	20.0	1	05/04/24	05/05/24	



Sample Data

Vertex Resource Services Inc. 3101 Boyd Drive Carlsbad NM, 88220	Project Name: Zeus SWD Line Project Number: 24015-0001 Project Manager: Chance Dixon	Reported: 5/7/2024 2:11:50PM
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WS24-11 4.0'  
E405058-03

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
<b>Volatile Organic Compounds by EPA 8260B</b>						
	mg/kg	mg/kg		Analyst: EG		Batch: 2418140
Benzene	ND	0.0250	1	05/04/24	05/05/24	
Ethylbenzene	ND	0.0250	1	05/04/24	05/05/24	
Toluene	ND	0.0250	1	05/04/24	05/05/24	
o-Xylene	ND	0.0250	1	05/04/24	05/05/24	
p,m-Xylene	ND	0.0500	1	05/04/24	05/05/24	
Total Xylenes	ND	0.0250	1	05/04/24	05/05/24	
Surrogate: Bromofluorobenzene	88.2 %	70-130		05/04/24	05/05/24	
Surrogate: 1,2-Dichloroethane-d4	104 %	70-130		05/04/24	05/05/24	
Surrogate: Toluene-d8	99.4 %	70-130		05/04/24	05/05/24	
<b>Nonhalogenated Organics by EPA 8015D - GRO</b>						
	mg/kg	mg/kg		Analyst: EG		Batch: 2418140
Gasoline Range Organics (C6-C10)	ND	20.0	1	05/04/24	05/05/24	
Surrogate: Bromofluorobenzene	88.2 %	70-130		05/04/24	05/05/24	
Surrogate: 1,2-Dichloroethane-d4	104 %	70-130		05/04/24	05/05/24	
Surrogate: Toluene-d8	99.4 %	70-130		05/04/24	05/05/24	
<b>Nonhalogenated Organics by EPA 8015D - DRO/ORO</b>						
	mg/kg	mg/kg		Analyst: KM		Batch: 2418145
Diesel Range Organics (C10-C28)	ND	25.0	1	05/04/24	05/04/24	
Oil Range Organics (C28-C36)	ND	50.0	1	05/04/24	05/04/24	
Surrogate: n-Nonane	73.0 %	50-200		05/04/24	05/04/24	
<b>Anions by EPA 300.0/9056A</b>						
	mg/kg	mg/kg		Analyst: DT		Batch: 2418147
Chloride	414	20.0	1	05/04/24	05/05/24	





Sample Data

Vertex Resource Services Inc. 3101 Boyd Drive Carlsbad NM, 88220	Project Name: Zeus SWD Line Project Number: 24015-0001 Project Manager: Chance Dixon	Reported: 5/7/2024 2:11:50PM
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WS24-12 4.0'  
E405058-04

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
<b>Volatile Organic Compounds by EPA 8260B</b>						
	mg/kg	mg/kg		Analyst: EG		Batch: 2418140
Benzene	ND	0.0250	1	05/04/24	05/05/24	
Ethylbenzene	ND	0.0250	1	05/04/24	05/05/24	
Toluene	ND	0.0250	1	05/04/24	05/05/24	
o-Xylene	ND	0.0250	1	05/04/24	05/05/24	
p,m-Xylene	ND	0.0500	1	05/04/24	05/05/24	
Total Xylenes	ND	0.0250	1	05/04/24	05/05/24	
Surrogate: Bromofluorobenzene		103 %	70-130	05/04/24	05/05/24	
Surrogate: 1,2-Dichloroethane-d4		104 %	70-130	05/04/24	05/05/24	
Surrogate: Toluene-d8		99.8 %	70-130	05/04/24	05/05/24	
<b>Nonhalogenated Organics by EPA 8015D - GRO</b>						
	mg/kg	mg/kg		Analyst: EG		Batch: 2418140
Gasoline Range Organics (C6-C10)	ND	20.0	1	05/04/24	05/05/24	
Surrogate: Bromofluorobenzene		103 %	70-130	05/04/24	05/05/24	
Surrogate: 1,2-Dichloroethane-d4		104 %	70-130	05/04/24	05/05/24	
Surrogate: Toluene-d8		99.8 %	70-130	05/04/24	05/05/24	
<b>Nonhalogenated Organics by EPA 8015D - DRO/ORO</b>						
	mg/kg	mg/kg		Analyst: KM		Batch: 2418145
Diesel Range Organics (C10-C28)	ND	25.0	1	05/04/24	05/05/24	
Oil Range Organics (C28-C36)	ND	50.0	1	05/04/24	05/05/24	
Surrogate: n-Nonane		73.4 %	50-200	05/04/24	05/05/24	
<b>Anions by EPA 300.0/9056A</b>						
	mg/kg	mg/kg		Analyst: DT		Batch: 2418147
Chloride	479	20.0	1	05/04/24	05/05/24	



Sample Data

Vertex Resource Services Inc. 3101 Boyd Drive Carlsbad NM, 88220	Project Name: Zeus SWD Line Project Number: 24015-0001 Project Manager: Chance Dixon	Reported: 5/7/2024 2:11:50PM
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WS24-13 4.0'  
E405058-05

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
<b>Volatile Organic Compounds by EPA 8260B</b>						
	mg/kg	mg/kg		Analyst: EG		Batch: 2418140
Benzene	ND	0.0250	1	05/04/24	05/05/24	
Ethylbenzene	ND	0.0250	1	05/04/24	05/05/24	
Toluene	ND	0.0250	1	05/04/24	05/05/24	
o-Xylene	ND	0.0250	1	05/04/24	05/05/24	
p,m-Xylene	ND	0.0500	1	05/04/24	05/05/24	
Total Xylenes	ND	0.0250	1	05/04/24	05/05/24	
Surrogate: Bromofluorobenzene		107 %	70-130	05/04/24	05/05/24	
Surrogate: 1,2-Dichloroethane-d4		99.4 %	70-130	05/04/24	05/05/24	
Surrogate: Toluene-d8		100 %	70-130	05/04/24	05/05/24	
<b>Nonhalogenated Organics by EPA 8015D - GRO</b>						
	mg/kg	mg/kg		Analyst: EG		Batch: 2418140
Gasoline Range Organics (C6-C10)	ND	20.0	1	05/04/24	05/05/24	
Surrogate: Bromofluorobenzene		107 %	70-130	05/04/24	05/05/24	
Surrogate: 1,2-Dichloroethane-d4		99.4 %	70-130	05/04/24	05/05/24	
Surrogate: Toluene-d8		100 %	70-130	05/04/24	05/05/24	
<b>Nonhalogenated Organics by EPA 8015D - DRO/ORO</b>						
	mg/kg	mg/kg		Analyst: KM		Batch: 2418145
Diesel Range Organics (C10-C28)	ND	25.0	1	05/04/24	05/05/24	
Oil Range Organics (C28-C36)	ND	50.0	1	05/04/24	05/05/24	
Surrogate: n-Nonane		73.0 %	50-200	05/04/24	05/05/24	
<b>Anions by EPA 300.0/9056A</b>						
	mg/kg	mg/kg		Analyst: DT		Batch: 2418147
Chloride	470	20.0	1	05/04/24	05/05/24	



Sample Data

Vertex Resource Services Inc. 3101 Boyd Drive Carlsbad NM, 88220	Project Name: Zeus SWD Line Project Number: 24015-0001 Project Manager: Chance Dixon	Reported: 5/7/2024 2:11:50PM
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WS24-14 4.0'  
E405058-06

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
<b>Volatile Organic Compounds by EPA 8260B</b>						
	mg/kg	mg/kg		Analyst: EG		Batch: 2418140
Benzene	ND	0.0250	1	05/04/24	05/05/24	
Ethylbenzene	ND	0.0250	1	05/04/24	05/05/24	
Toluene	ND	0.0250	1	05/04/24	05/05/24	
o-Xylene	ND	0.0250	1	05/04/24	05/05/24	
p,m-Xylene	ND	0.0500	1	05/04/24	05/05/24	
Total Xylenes	ND	0.0250	1	05/04/24	05/05/24	
Surrogate: Bromofluorobenzene		108 %	70-130	05/04/24	05/05/24	
Surrogate: 1,2-Dichloroethane-d4		102 %	70-130	05/04/24	05/05/24	
Surrogate: Toluene-d8		99.3 %	70-130	05/04/24	05/05/24	
<b>Nonhalogenated Organics by EPA 8015D - GRO</b>						
	mg/kg	mg/kg		Analyst: EG		Batch: 2418140
Gasoline Range Organics (C6-C10)	ND	20.0	1	05/04/24	05/05/24	
Surrogate: Bromofluorobenzene		108 %	70-130	05/04/24	05/05/24	
Surrogate: 1,2-Dichloroethane-d4		102 %	70-130	05/04/24	05/05/24	
Surrogate: Toluene-d8		99.3 %	70-130	05/04/24	05/05/24	
<b>Nonhalogenated Organics by EPA 8015D - DRO/ORO</b>						
	mg/kg	mg/kg		Analyst: KM		Batch: 2418145
Diesel Range Organics (C10-C28)	ND	25.0	1	05/04/24	05/05/24	
Oil Range Organics (C28-C36)	ND	50.0	1	05/04/24	05/05/24	
Surrogate: n-Nonane		72.6 %	50-200	05/04/24	05/05/24	
<b>Anions by EPA 300.0/9056A</b>						
	mg/kg	mg/kg		Analyst: DT		Batch: 2418147
Chloride	356	20.0	1	05/04/24	05/05/24	



Sample Data

Vertex Resource Services Inc. 3101 Boyd Drive Carlsbad NM, 88220	Project Name: Zeus SWD Line Project Number: 24015-0001 Project Manager: Chance Dixon	Reported: 5/7/2024 2:11:50PM
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WS24-15 4.0'  
E405058-07

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
<b>Volatile Organic Compounds by EPA 8260B</b>						
	mg/kg	mg/kg	Analyst: EG		Batch: 2418140	
Benzene	ND	0.0250	1	05/04/24	05/05/24	
Ethylbenzene	ND	0.0250	1	05/04/24	05/05/24	
Toluene	ND	0.0250	1	05/04/24	05/05/24	
o-Xylene	ND	0.0250	1	05/04/24	05/05/24	
p,m-Xylene	ND	0.0500	1	05/04/24	05/05/24	
Total Xylenes	ND	0.0250	1	05/04/24	05/05/24	
Surrogate: Bromofluorobenzene	102 %	70-130		05/04/24	05/05/24	
Surrogate: 1,2-Dichloroethane-d4	99.7 %	70-130		05/04/24	05/05/24	
Surrogate: Toluene-d8	85.3 %	70-130		05/04/24	05/05/24	
<b>Nonhalogenated Organics by EPA 8015D - GRO</b>						
	mg/kg	mg/kg	Analyst: EG		Batch: 2418140	
Gasoline Range Organics (C6-C10)	ND	20.0	1	05/04/24	05/05/24	
Surrogate: Bromofluorobenzene	102 %	70-130		05/04/24	05/05/24	
Surrogate: 1,2-Dichloroethane-d4	99.7 %	70-130		05/04/24	05/05/24	
Surrogate: Toluene-d8	85.3 %	70-130		05/04/24	05/05/24	
<b>Nonhalogenated Organics by EPA 8015D - DRO/ORO</b>						
	mg/kg	mg/kg	Analyst: KM		Batch: 2418145	
Diesel Range Organics (C10-C28)	ND	25.0	1	05/04/24	05/05/24	
Oil Range Organics (C28-C36)	ND	50.0	1	05/04/24	05/05/24	
Surrogate: n-Nonane	73.3 %	50-200		05/04/24	05/05/24	
<b>Anions by EPA 300.0/9056A</b>						
	mg/kg	mg/kg	Analyst: DT		Batch: 2418147	
Chloride	843	20.0	1	05/04/24	05/05/24	



QC Summary Data

Vertex Resource Services Inc. 3101 Boyd Drive Carlsbad NM, 88220	Project Name: Zeus SWD Line Project Number: 24015-0001 Project Manager: Chance Dixon	Reported:  5/7/2024 2:11:50PM
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Volatile Organic Compounds by EPA 8260B

Analyst: EG

Analyte	Result mg/kg	Reporting Limit mg/kg	Spike Level mg/kg	Source Result mg/kg	Rec %	Rec Limits %	RPD %	RPD Limit %	Notes
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Blank (2418140-BLK1) Prepared: 05/04/24 Analyzed: 05/04/24

Benzene	ND	0.0250							
Ethylbenzene	ND	0.0250							
Toluene	ND	0.0250							
o-Xylene	ND	0.0250							
p,m-Xylene	ND	0.0500							
Total Xylenes	ND	0.0250							
Surrogate: Bromofluorobenzene	0.528		0.500		106	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.500		0.500		100	70-130			
Surrogate: Toluene-d8	0.506		0.500		101	70-130			

LCS (2418140-BS1) Prepared: 05/04/24 Analyzed: 05/04/24

Benzene	2.77	0.0250	2.50		111	70-130			
Ethylbenzene	2.60	0.0250	2.50		104	70-130			
Toluene	2.48	0.0250	2.50		99.3	70-130			
o-Xylene	2.48	0.0250	2.50		99.1	70-130			
p,m-Xylene	5.00	0.0500	5.00		99.9	70-130			
Total Xylenes	7.47	0.0250	7.50		99.7	70-130			
Surrogate: Bromofluorobenzene	0.507		0.500		101	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.494		0.500		98.8	70-130			
Surrogate: Toluene-d8	0.498		0.500		99.5	70-130			

Matrix Spike (2418140-MS1) Source: E405058-01 Prepared: 05/04/24 Analyzed: 05/04/24

Benzene	2.77	0.0250	2.50	ND	111	48-131			
Ethylbenzene	2.66	0.0250	2.50	ND	106	45-135			
Toluene	2.52	0.0250	2.50	ND	101	48-130			
o-Xylene	2.56	0.0250	2.50	ND	103	43-135			
p,m-Xylene	5.18	0.0500	5.00	ND	104	43-135			
Total Xylenes	7.74	0.0250	7.50	ND	103	43-135			
Surrogate: Bromofluorobenzene	0.516		0.500		103	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.503		0.500		101	70-130			
Surrogate: Toluene-d8	0.501		0.500		100	70-130			

Matrix Spike Dup (2418140-MSD1) Source: E405058-01 Prepared: 05/04/24 Analyzed: 05/04/24

Benzene	2.72	0.0250	2.50	ND	109	48-131	2.01	23	
Ethylbenzene	2.59	0.0250	2.50	ND	104	45-135	2.32	27	
Toluene	2.46	0.0250	2.50	ND	98.2	48-130	2.71	24	
o-Xylene	2.58	0.0250	2.50	ND	103	43-135	0.622	27	
p,m-Xylene	5.20	0.0500	5.00	ND	104	43-135	0.501	27	
Total Xylenes	7.78	0.0250	7.50	ND	104	43-135	0.541	27	
Surrogate: Bromofluorobenzene	0.524		0.500		105	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.499		0.500		99.8	70-130			
Surrogate: Toluene-d8	0.491		0.500		98.2	70-130			





QC Summary Data

Vertex Resource Services Inc. 3101 Boyd Drive Carlsbad NM, 88220	Project Name: Zeus SWD Line Project Number: 24015-0001 Project Manager: Chance Dixon	Reported:  5/7/2024 2:11:50PM
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Nonhalogenated Organics by EPA 8015D - GRO

Analyst: EG

Analyte	Result mg/kg	Reporting Limit mg/kg	Spike Level mg/kg	Source Result mg/kg	Rec % %	Rec Limits %	RPD %	RPD Limit %	Notes
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Blank (2418140-BLK1) Prepared: 05/04/24 Analyzed: 05/04/24

Gasoline Range Organics (C6-C10)	ND	20.0							
Surrogate: Bromofluorobenzene	0.528		0.500		106	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.500		0.500		100	70-130			
Surrogate: Toluene-d8	0.506		0.500		101	70-130			

LCS (2418140-BS2) Prepared: 05/04/24 Analyzed: 05/04/24

Gasoline Range Organics (C6-C10)	56.9	20.0	50.0		114	70-130			
Surrogate: Bromofluorobenzene	0.533		0.500		107	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.467		0.500		93.4	70-130			
Surrogate: Toluene-d8	0.498		0.500		99.6	70-130			

Matrix Spike (2418140-MS2) Source: E405058-01 Prepared: 05/04/24 Analyzed: 05/04/24

Gasoline Range Organics (C6-C10)	55.6	20.0	50.0	ND	111	70-130			
Surrogate: Bromofluorobenzene	0.539		0.500		108	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.485		0.500		96.9	70-130			
Surrogate: Toluene-d8	0.497		0.500		99.4	70-130			

Matrix Spike Dup (2418140-MSD2) Source: E405058-01 Prepared: 05/04/24 Analyzed: 05/04/24

Gasoline Range Organics (C6-C10)	61.1	20.0	50.0	ND	122	70-130	9.41	20	
Surrogate: Bromofluorobenzene	0.545		0.500		109	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.483		0.500		96.6	70-130			
Surrogate: Toluene-d8	0.495		0.500		98.9	70-130			



QC Summary Data

Vertex Resource Services Inc. 3101 Boyd Drive Carlsbad NM, 88220	Project Name: Zeus SWD Line Project Number: 24015-0001 Project Manager: Chance Dixon	Reported:  5/7/2024 2:11:50PM
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Nonhalogenated Organics by EPA 8015D - DRO/ORO

Analyst: KM

Analyte	Result mg/kg	Reporting Limit mg/kg	Spike Level mg/kg	Source Result mg/kg	Rec %	Rec Limits %	RPD %	RPD Limit %	Notes
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Blank (2418145-BLK1) Prepared: 05/04/24 Analyzed: 05/04/24

Diesel Range Organics (C10-C28)	ND	25.0							
Oil Range Organics (C28-C36)	ND	50.0							
Surrogate: n-Nonane	37.0		50.0		74.0	50-200			

LCS (2418145-BS1) Prepared: 05/04/24 Analyzed: 05/04/24

Diesel Range Organics (C10-C28)	224	25.0	250		89.8	38-132			
Surrogate: n-Nonane	37.3		50.0		74.5	50-200			

LCS Dup (2418145-BSD1) Prepared: 05/04/24 Analyzed: 05/04/24

Diesel Range Organics (C10-C28)	231	25.0	250		92.4	38-132	2.85	20	
Surrogate: n-Nonane	37.3		50.0		74.5	50-200			



QC Summary Data

Vertex Resource Services Inc. 3101 Boyd Drive Carlsbad NM, 88220	Project Name: Zeus SWD Line Project Number: 24015-0001 Project Manager: Chance Dixon	Reported:  5/7/2024 2:11:50PM
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Anions by EPA 300.0/9056A

Analyst: DT

Analyte	Result mg/kg	Reporting Limit mg/kg	Spike Level mg/kg	Source Result mg/kg	Rec %	Rec Limits %	RPD %	RPD Limit %	Notes
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Blank (2418147-BLK1)					Prepared: 05/04/24 Analyzed: 05/04/24				
Chloride	ND	20.0							
LCS (2418147-BS1)					Prepared: 05/04/24 Analyzed: 05/04/24				
Chloride	263	20.0	250		105	90-110			
LCS Dup (2418147-BSD1)					Prepared: 05/04/24 Analyzed: 05/04/24				
Chloride	261	20.0	250		104	90-110	0.760	20	

QC Summary Report Comment:  
Calculations are based off of the raw (non-rounded) data. However, for reporting purposes all QC data is rounded to three significant figures.  
Therefore, hand calculated values may differ slightly.



Definitions and Notes

Vertex Resource Services Inc.	Project Name:	Zeus SWD Line	
3101 Boyd Drive	Project Number:	24015-0001	Reported:
Carlsbad NM, 88220	Project Manager:	Chance Dixon	05/07/24 14:11

- ND      Analyte NOT DETECTED at or above the reporting limit
- NR      Not Reported
- RPD      Relative Percent Difference
- DNI      Did Not Ignite
- DNR      Did not react with the addition of acid or base.
- Note (1): Methods marked with \*\* are non-accredited methods.
- Note (2): Soil data is reported on an "as received" weight basis, unless reported otherwise.

## Chain of Custody

Page 1 of 1

Client Information				Invoice Information				Lab Use Only				TAT				State			
Client: <u>Vertex</u>				Company: <u>Top Rock Resources</u>				Lab WO# <u>E405058</u>				Job Number <u>24015-0001</u>				<div style="display: flex; justify-content: space-between;"> <div>1D <input checked="" type="checkbox"/></div> <div>2D <input type="checkbox"/></div> <div>3D <input type="checkbox"/></div> <div>Std <input type="checkbox"/></div> </div>			
Project Name: <u>Zeus SWD Line</u>				Address:								<div style="display: flex; justify-content: space-between;"> <div>NM <input type="checkbox"/></div> <div>CO <input type="checkbox"/></div> <div>UT <input type="checkbox"/></div> <div>TX <input type="checkbox"/></div> </div>							
Project Manager: <u>Chance Dixon</u>				City, State, Zip:															
Address:				Phone:															
City, State, Zip:				Email:															
Phone:				Miscellaneous:															
Email:																			

Sample Information						Analysis and Method										EPA Program			
Time Sampled	Date Sampled	Matrix	No. of Containers	Sample ID		Field	Filter	Lab Number	DRO/DRO by 8015	CRD/DRO by 8015	RTX by 8021	VOC by 8260	Chloride 300.0	BGDOC - NM	TCEQ 1005 - TX	RCRA 8 Metals	SDWA	CWA	RCRA
1300	5-2-24	Soil	1	WS24-09	4.0'			1											
1310				WS24-10	4.0'			2											
1320				WS24-11	4.0'			3											
1330				WS24-12	4.0'			4											
1340				WS24-13	4.0'			5											
1350				WS24-14	4.0'			6											
1400				WS24-15	4.0'			7											

**Additional Instructions:** NRM2026231125

I, (field sampler), attest to the validity and authenticity of this sample. I am aware that tampering with or intentionally mislabeling the sample location, date or time of collection is considered fraud and may be grounds for legal action.

Sampled by: [Signature]

Relinquished by: (Signature) <u>[Signature]</u>	Date <u>5/3/24</u>	Time <u>15:48</u>	Received by: (Signature) <u>[Signature]</u>	Date <u>5/3/24</u>	Time <u>1548</u>
Relinquished by: (Signature) <u>[Signature]</u>	Date <u>5/3/24</u>	Time <u>1700</u>	Received by: (Signature) <u>[Signature]</u>	Date <u>5.3.24</u>	Time <u>1900</u>
Relinquished by: (Signature) <u>[Signature]</u>	Date <u>5.3.24</u>	Time <u>2400</u>	Received by: (Signature) <u>[Signature]</u>	Date <u>5/4/24</u>	Time <u>7:15</u>
Relinquished by: (Signature) <u>[Signature]</u>	Date	Time	Received by: (Signature)	Date	Time

Sample Matrix: S - Soil, Sd - Solid, Sg - Sludge, A - Aqueous, O - Other \_\_\_\_\_

Container Type: g - glass, p - poly/plastic, ag - amber glass, v - VOA \_\_\_\_\_

AVG Temp °C 4

Note: Samples are discarded 14 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at the client expense. The report for the analysis of the above samples is applicable only to those samples received by the laboratory with this COC. The liability of the laboratory is limited to the amount paid for on the report.



envirotech



## Envirotech Analytical Laboratory

Printed: 5/6/2024 3:28:22PM

## Sample Receipt Checklist (SRC)

Instructions: Please take note of any NO checkmarks.

If we receive no response concerning these items within 24 hours of the date of this notice, all the samples will be analyzed as requested.

Client:	Vertex Resource Services Inc.	Date Received:	05/04/24 07:15	Work Order ID:	E405058
Phone:	(575) 748-0176	Date Logged In:	05/04/24 09:40	Logged In By:	Raina Schwanz
Email:	cdixon@vertex.ca	Due Date:	05/07/24 17:00 (1 day TAT)		

**Chain of Custody (COC)**

1. Does the sample ID match the COC? Yes
2. Does the number of samples per sampling site location match the COC? Yes
3. Were samples dropped off by client or carrier? Yes
4. Was the COC complete, i.e., signatures, dates/times, requested analyses? Yes
5. Were all samples received within holding time? Yes

Note: Analysis, such as pH which should be conducted in the field, i.e., 15 minute hold time, are not included in this discussion.

Carrier: Courier**Comments/Resolution****Sample Turn Around Time (TAT)**

6. Did the COC indicate standard TAT, or Expedited TAT? Yes

**Sample Cooler**

7. Was a sample cooler received? Yes
8. If yes, was cooler received in good condition? Yes
9. Was the sample(s) received intact, i.e., not broken? Yes
10. Were custody/security seals present? No
11. If yes, were custody/security seals intact? NA
12. Was the sample received on ice? If yes, the recorded temp is 4°C, i.e., 6°±2°C? Yes

Note: Thermal preservation is not required, if samples are received w/i 15 minutes of sampling

13. If no visible ice, record the temperature. Actual sample temperature: 4°C

**Sample Container**

14. Are aqueous VOC samples present? No
15. Are VOC samples collected in VOA Vials? NA
16. Is the head space less than 6-8 mm (pea sized or less)? NA
17. Was a trip blank (TB) included for VOC analyses? NA
18. Are non-VOC samples collected in the correct containers? Yes
19. Is the appropriate volume/weight or number of sample containers collected? Yes

**Field Label**

20. Were field sample labels filled out with the minimum information:  
Sample ID? Yes  
Date/Time Collected? Yes  
Collectors name? Yes

**Sample Preservation**

21. Does the COC or field labels indicate the samples were preserved? No
22. Are sample(s) correctly preserved? NA
24. Is lab filtration required and/or requested for dissolved metals? No

**Multiphase Sample Matrix**

26. Does the sample have more than one phase, i.e., multiphase? No
27. If yes, does the COC specify which phase(s) is to be analyzed? NA

**Subcontract Laboratory**

28. Are samples required to get sent to a subcontract laboratory? No
29. Was a subcontract laboratory specified by the client and if so who? NA Subcontract Lab: NA

**Client Instruction**

Signature of client authorizing changes to the COC or sample disposition.

Date



envirotech Inc.

Report to:  
Chance Dixon



# envirotech

*Practical Solutions for a Better Tomorrow*

## Analytical Report

Vertex Resource Services Inc.

Project Name: Zeus SWD Line

Work Order: E405076

Job Number: 19031-0001

Received: 5/7/2024

Revision: 1

Report Reviewed By:

Walter Hinchman  
Laboratory Director  
5/8/24

5796 U.S. Hwy 64  
Farmington, NM 87401

Phone: (505) 632-1881  
Envirotech-inc.com



Envirotech Inc. certifies the test results meet all requirements of TNI unless noted otherwise.  
Statement of Data Authenticity: Envirotech Inc. attests the data reported has not been altered in any way.  
Partial or incomplete reproduction of this report is prohibited, unless approved by Envirotech Inc.  
Envirotech Inc. holds the Utah TNI certification NM00979 for data reported.  
Envirotech Inc. holds the Texas TNI certification T104704557 for data reported.

Date Reported: 5/8/24

Chance Dixon  
3101 Boyd Drive  
Carlsbad, NM 88220



Project Name: Zeus SWD Line  
Workorder: E405076  
Date Received: 5/7/2024 5:00:00AM

Chance Dixon,

Thank you for choosing Envirotech, Inc. as your analytical testing laboratory for the sample(s) received on, 5/7/2024 5:00:00AM, under the Project Name: Zeus SWD Line.

The analytical test results summarized in this report with the Project Name: Zeus SWD Line apply to the individual samples collected, identified and submitted bearing the project name on the enclosed chain-of-custody. Subcontracted sample analyses not conducted by Envirotech, Inc., are attached in full as issued by the subcontract laboratory.

Please review the Chain-of-Custody (COC) and Sample Receipt Checklist (SRC) for any issues regarding sample receipt temperature, containers, preservation etc. To best understand your test results, review the entire report summarizing your sample data and the associated quality control batch data.

All reported data in this analytical report were analyzed according to the referenced method(s) and are in compliance with the latest NELAC/TNI standards, unless otherwise noted. Samples or analytical quality control parameters not meeting specific QC criteria are qualified with a data flag. Data flag definitions are located in the Notes and Definitions section of this analytical report.

If you have any questions concerning this report, please feel free to contact Envirotech, Inc.

Respectfully,

**Walter Hinchman**  
Laboratory Director  
Office: 505-632-1881  
Cell: 775-287-1762  
[whinchman@envirotech-inc.com](mailto:whinchman@envirotech-inc.com)

**Raina Schwanz**  
Laboratory Administrator  
Office: 505-632-1881  
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**Alexa Michaels**  
Sample Custody Officer  
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Envirotech Web Address: [www.envirotech-inc.com](http://www.envirotech-inc.com)

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Sample Summary

Vertex Resource Services Inc. 3101 Boyd Drive Carlsbad NM, 88220	Project Name: Zeus SWD Line Project Number: 19031-0001 Project Manager: Chance Dixon	Reported: 05/08/24 12:48
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Client Sample ID	Lab Sample ID	Matrix	Sampled	Received	Container
WS24-16 4.0'	E405076-01A	Soil	05/03/24	05/07/24	Glass Jar, 2 oz.
WS24-18 4.0'	E405076-02A	Soil	05/03/24	05/07/24	Glass Jar, 2 oz.
WS24-20 4.0'	E405076-03A	Soil	05/03/24	05/07/24	Glass Jar, 2 oz.
WS24-22 4.0'	E405076-04A	Soil	05/03/24	05/07/24	Glass Jar, 2 oz.





Sample Data

Vertex Resource Services Inc. 3101 Boyd Drive Carlsbad NM, 88220	Project Name: Zeus SWD Line Project Number: 19031-0001 Project Manager: Chance Dixon	Reported: 5/8/2024 12:48:07PM
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WS24-16 4.0'  
E405076-01

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
<b>Volatile Organics by EPA 8021B</b>	mg/kg	mg/kg	Analyst: EG		Batch: 2419057	
Benzene	ND	0.0250	1	05/07/24	05/07/24	
Ethylbenzene	ND	0.0250	1	05/07/24	05/07/24	
Toluene	ND	0.0250	1	05/07/24	05/07/24	
o-Xylene	ND	0.0250	1	05/07/24	05/07/24	
p,m-Xylene	ND	0.0500	1	05/07/24	05/07/24	
Total Xylenes	ND	0.0250	1	05/07/24	05/07/24	
Surrogate: 4-Bromochlorobenzene-PID	93.2 %	70-130		05/07/24	05/07/24	
<b>Nonhalogenated Organics by EPA 8015D - GRO</b>	mg/kg	mg/kg	Analyst: EG		Batch: 2419057	
Gasoline Range Organics (C6-C10)	ND	20.0	1	05/07/24	05/07/24	
Surrogate: 1-Chloro-4-fluorobenzene-FID	89.1 %	70-130		05/07/24	05/07/24	
<b>Nonhalogenated Organics by EPA 8015D - DRO/ORO</b>	mg/kg	mg/kg	Analyst: KM		Batch: 2419058	
Diesel Range Organics (C10-C28)	ND	25.0	1	05/07/24	05/07/24	
Oil Range Organics (C28-C36)	ND	50.0	1	05/07/24	05/07/24	
Surrogate: n-Nonane	102 %	50-200		05/07/24	05/07/24	
<b>Anions by EPA 300.0/9056A</b>	mg/kg	mg/kg	Analyst: IY		Batch: 2419056	
Chloride	182	20.0	1	05/07/24	05/07/24	



Sample Data

Vertex Resource Services Inc. 3101 Boyd Drive Carlsbad NM, 88220	Project Name: Zeus SWD Line Project Number: 19031-0001 Project Manager: Chance Dixon	Reported: 5/8/2024 12:48:07PM
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WS24-18 4.0'  
E405076-02

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
<b>Volatile Organics by EPA 8021B</b>	mg/kg	mg/kg	Analyst: EG		Batch: 2419057	
Benzene	ND	0.0250	1	05/07/24	05/07/24	
Ethylbenzene	ND	0.0250	1	05/07/24	05/07/24	
Toluene	ND	0.0250	1	05/07/24	05/07/24	
o-Xylene	ND	0.0250	1	05/07/24	05/07/24	
p,m-Xylene	ND	0.0500	1	05/07/24	05/07/24	
Total Xylenes	ND	0.0250	1	05/07/24	05/07/24	
Surrogate: 4-Bromochlorobenzene-PID	93.4 %	70-130		05/07/24	05/07/24	
<b>Nonhalogenated Organics by EPA 8015D - GRO</b>	mg/kg	mg/kg	Analyst: EG		Batch: 2419057	
Gasoline Range Organics (C6-C10)	ND	20.0	1	05/07/24	05/07/24	
Surrogate: 1-Chloro-4-fluorobenzene-FID	89.6 %	70-130		05/07/24	05/07/24	
<b>Nonhalogenated Organics by EPA 8015D - DRO/ORO</b>	mg/kg	mg/kg	Analyst: KM		Batch: 2419058	
Diesel Range Organics (C10-C28)	ND	25.0	1	05/07/24	05/07/24	
Oil Range Organics (C28-C36)	ND	50.0	1	05/07/24	05/07/24	
Surrogate: n-Nonane	101 %	50-200		05/07/24	05/07/24	
<b>Anions by EPA 300.0/9056A</b>	mg/kg	mg/kg	Analyst: IY		Batch: 2419056	
Chloride	804	20.0	1	05/07/24	05/07/24	



Sample Data

Vertex Resource Services Inc. 3101 Boyd Drive Carlsbad NM, 88220	Project Name: Zeus SWD Line Project Number: 19031-0001 Project Manager: Chance Dixon	Reported: 5/8/2024 12:48:07PM
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WS24-20 4.0'  
E405076-03

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
<b>Volatile Organics by EPA 8021B</b>						
	mg/kg	mg/kg	Analyst: EG		Batch: 2419057	
Benzene	ND	0.0250	1	05/07/24	05/07/24	
Ethylbenzene	ND	0.0250	1	05/07/24	05/07/24	
Toluene	ND	0.0250	1	05/07/24	05/07/24	
o-Xylene	ND	0.0250	1	05/07/24	05/07/24	
p,m-Xylene	ND	0.0500	1	05/07/24	05/07/24	
Total Xylenes	ND	0.0250	1	05/07/24	05/07/24	
<i>Surrogate: 4-Bromochlorobenzene-PID</i>						
	93.1 %	70-130		05/07/24	05/07/24	
<b>Nonhalogenated Organics by EPA 8015D - GRO</b>						
	mg/kg	mg/kg	Analyst: EG		Batch: 2419057	
Gasoline Range Organics (C6-C10)	ND	20.0	1	05/07/24	05/07/24	
<i>Surrogate: 1-Chloro-4-fluorobenzene-FID</i>						
	90.3 %	70-130		05/07/24	05/07/24	
<b>Nonhalogenated Organics by EPA 8015D - DRO/ORO</b>						
	mg/kg	mg/kg	Analyst: KM		Batch: 2419058	
Diesel Range Organics (C10-C28)	ND	25.0	1	05/07/24	05/07/24	
Oil Range Organics (C28-C36)	ND	50.0	1	05/07/24	05/07/24	
<i>Surrogate: n-Nonane</i>						
	103 %	50-200		05/07/24	05/07/24	
<b>Anions by EPA 300.0/9056A</b>						
	mg/kg	mg/kg	Analyst: IY		Batch: 2419056	
Chloride	921	20.0	1	05/07/24	05/07/24	



Sample Data

Vertex Resource Services Inc. 3101 Boyd Drive Carlsbad NM, 88220	Project Name: Zeus SWD Line Project Number: 19031-0001 Project Manager: Chance Dixon	Reported: 5/8/2024 12:48:07PM
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WS24-22 4.0'  
E405076-04

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
<b>Volatile Organics by EPA 8021B</b>	mg/kg	mg/kg	Analyst: EG		Batch: 2419057	
Benzene	ND	0.0250	1	05/07/24	05/07/24	
Ethylbenzene	ND	0.0250	1	05/07/24	05/07/24	
Toluene	ND	0.0250	1	05/07/24	05/07/24	
o-Xylene	ND	0.0250	1	05/07/24	05/07/24	
p,m-Xylene	ND	0.0500	1	05/07/24	05/07/24	
Total Xylenes	ND	0.0250	1	05/07/24	05/07/24	
Surrogate: 4-Bromochlorobenzene-PID	93.4 %	70-130		05/07/24	05/07/24	
<b>Nonhalogenated Organics by EPA 8015D - GRO</b>	mg/kg	mg/kg	Analyst: EG		Batch: 2419057	
Gasoline Range Organics (C6-C10)	ND	20.0	1	05/07/24	05/07/24	
Surrogate: 1-Chloro-4-fluorobenzene-FID	89.4 %	70-130		05/07/24	05/07/24	
<b>Nonhalogenated Organics by EPA 8015D - DRO/ORO</b>	mg/kg	mg/kg	Analyst: KM		Batch: 2419058	
Diesel Range Organics (C10-C28)	ND	25.0	1	05/07/24	05/07/24	
Oil Range Organics (C28-C36)	ND	50.0	1	05/07/24	05/07/24	
Surrogate: n-Nonane	103 %	50-200		05/07/24	05/07/24	
<b>Anions by EPA 300.0/9056A</b>	mg/kg	mg/kg	Analyst: IY		Batch: 2419056	
Chloride	1390	20.0	1	05/07/24	05/07/24	



QC Summary Data

Vertex Resource Services Inc. 3101 Boyd Drive Carlsbad NM, 88220	Project Name: Zeus SWD Line Project Number: 19031-0001 Project Manager: Chance Dixon	Reported:  5/8/2024 12:48:07PM
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Volatile Organics by EPA 8021B

Analyst: EG

Analyte	Result mg/kg	Reporting Limit mg/kg	Spike Level mg/kg	Source Result mg/kg	Rec %	Rec Limits %	RPD %	RPD Limit %	Notes
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Blank (2419057-BLK1) Prepared: 05/07/24 Analyzed: 05/07/24

Benzene	ND	0.0250							
Ethylbenzene	ND	0.0250							
Toluene	ND	0.0250							
o-Xylene	ND	0.0250							
p,m-Xylene	ND	0.0500							
Total Xylenes	ND	0.0250							
Surrogate: 4-Bromochlorobenzene-PID	7.62		8.00		95.3	70-130			

LCS (2419057-BS1) Prepared: 05/07/24 Analyzed: 05/07/24

Benzene	5.16	0.0250	5.00		103	70-130			
Ethylbenzene	5.01	0.0250	5.00		100	70-130			
Toluene	5.10	0.0250	5.00		102	70-130			
o-Xylene	5.00	0.0250	5.00		99.9	70-130			
p,m-Xylene	10.2	0.0500	10.0		102	70-130			
Total Xylenes	15.2	0.0250	15.0		101	70-130			
Surrogate: 4-Bromochlorobenzene-PID	7.54		8.00		94.3	70-130			

Matrix Spike (2419057-MS1) Source: E405077-04 Prepared: 05/07/24 Analyzed: 05/07/24

Benzene	5.05	0.0250	5.00	ND	101	54-133			
Ethylbenzene	4.90	0.0250	5.00	ND	98.0	61-133			
Toluene	4.99	0.0250	5.00	ND	99.7	61-130			
o-Xylene	4.89	0.0250	5.00	ND	97.7	63-131			
p,m-Xylene	9.95	0.0500	10.0	ND	99.5	63-131			
Total Xylenes	14.8	0.0250	15.0	ND	98.9	63-131			
Surrogate: 4-Bromochlorobenzene-PID	7.48		8.00		93.4	70-130			

Matrix Spike Dup (2419057-MSD1) Source: E405077-04 Prepared: 05/07/24 Analyzed: 05/07/24

Benzene	4.66	0.0250	5.00	ND	93.2	54-133	8.09	20	
Ethylbenzene	4.53	0.0250	5.00	ND	90.6	61-133	7.82	20	
Toluene	4.60	0.0250	5.00	ND	92.0	61-130	8.07	20	
o-Xylene	4.51	0.0250	5.00	ND	90.2	63-131	8.01	20	
p,m-Xylene	9.19	0.0500	10.0	ND	91.9	63-131	8.03	20	
Total Xylenes	13.7	0.0250	15.0	ND	91.3	63-131	8.02	20	
Surrogate: 4-Bromochlorobenzene-PID	7.37		8.00		92.1	70-130			





QC Summary Data

Vertex Resource Services Inc. 3101 Boyd Drive Carlsbad NM, 88220	Project Name: Zeus SWD Line Project Number: 19031-0001 Project Manager: Chance Dixon	Reported:  5/8/2024 12:48:07PM
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Nonhalogenated Organics by EPA 8015D - GRO

Analyst: EG

Analyte	Result mg/kg	Reporting Limit mg/kg	Spike Level mg/kg	Source Result mg/kg	Rec %	Rec Limits %	RPD %	RPD Limit %	Notes
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Blank (2419057-BLK1) Prepared: 05/07/24 Analyzed: 05/07/24

Gasoline Range Organics (C6-C10)	ND	20.0							
Surrogate: 1-Chloro-4-fluorobenzene-FID	7.10		8.00		88.8	70-130			

LCS (2419057-BS2) Prepared: 05/07/24 Analyzed: 05/07/24

Gasoline Range Organics (C6-C10)	47.2	20.0	50.0		94.5	70-130			
Surrogate: 1-Chloro-4-fluorobenzene-FID	7.17		8.00		89.7	70-130			

Matrix Spike (2419057-MS2) Source: E405077-04 Prepared: 05/07/24 Analyzed: 05/07/24

Gasoline Range Organics (C6-C10)	46.1	20.0	50.0	ND	92.1	70-130			
Surrogate: 1-Chloro-4-fluorobenzene-FID	7.37		8.00		92.1	70-130			

Matrix Spike Dup (2419057-MSD2) Source: E405077-04 Prepared: 05/07/24 Analyzed: 05/07/24

Gasoline Range Organics (C6-C10)	47.4	20.0	50.0	ND	94.9	70-130	2.94	20	
Surrogate: 1-Chloro-4-fluorobenzene-FID	7.29		8.00		91.1	70-130			



QC Summary Data

Vertex Resource Services Inc. 3101 Boyd Drive Carlsbad NM, 88220	Project Name: Zeus SWD Line Project Number: 19031-0001 Project Manager: Chance Dixon	Reported:  5/8/2024 12:48:07PM
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Nonhalogenated Organics by EPA 8015D - DRO/ORO

Analyst: KM

Analyte	Result mg/kg	Reporting Limit mg/kg	Spike Level mg/kg	Source Result mg/kg	Rec %	Rec Limits %	RPD %	RPD Limit %	Notes
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Blank (2419058-BLK1)					Prepared: 05/07/24 Analyzed: 05/07/24				
Diesel Range Organics (C10-C28)	ND	25.0							
Oil Range Organics (C28-C36)	ND	50.0							
Surrogate: n-Nonane	52.1		50.0		104	50-200			

LCS (2419058-BS1)					Prepared: 05/07/24 Analyzed: 05/07/24				
Diesel Range Organics (C10-C28)	303	25.0	250		121	38-132			
Surrogate: n-Nonane	52.3		50.0		105	50-200			

LCS Dup (2419058-BSD1)					Prepared: 05/07/24 Analyzed: 05/07/24				
Diesel Range Organics (C10-C28)	278	25.0	250		111	38-132	8.61	20	
Surrogate: n-Nonane	51.0		50.0		102	50-200			



QC Summary Data

Vertex Resource Services Inc. 3101 Boyd Drive Carlsbad NM, 88220	Project Name: Zeus SWD Line Project Number: 19031-0001 Project Manager: Chance Dixon	Reported:  5/8/2024 12:48:07PM
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Anions by EPA 300.0/9056A

Analyst: IY

Analyte	Result mg/kg	Reporting Limit mg/kg	Spike Level mg/kg	Source Result mg/kg	Rec %	Rec Limits %	RPD %	RPD Limit %	Notes
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Blank (2419056-BLK1)					Prepared: 05/07/24 Analyzed: 05/07/24				
Chloride	ND	20.0							
LCS (2419056-BS1)					Prepared: 05/07/24 Analyzed: 05/07/24				
Chloride	254	20.0	250		101	90-110			
LCS Dup (2419056-BSD1)					Prepared: 05/07/24 Analyzed: 05/07/24				
Chloride	258	20.0	250		103	90-110	1.66	20	

QC Summary Report Comment:  
Calculations are based off of the raw (non-rounded) data. However, for reporting purposes all QC data is rounded to three significant figures.  
Therefore, hand calculated values may differ slightly.



Definitions and Notes

Vertex Resource Services Inc.	Project Name:	Zeus SWD Line	
3101 Boyd Drive	Project Number:	19031-0001	Reported:
Carlsbad NM, 88220	Project Manager:	Chance Dixon	05/08/24 12:48

- ND      Analyte NOT DETECTED at or above the reporting limit
- NR      Not Reported
- RPD      Relative Percent Difference
- DNI      Did Not Ignite
- DNR      Did not react with the addition of acid or base.
- Note (1): Methods marked with \*\* are non-accredited methods.
- Note (2): Soil data is reported on an "as received" weight basis, unless reported otherwise.



Bill To

Attention: Top Rock Resources

Address: \_\_\_\_\_

City, State, Zip \_\_\_\_\_

Phone: \_\_\_\_\_

Email: \_\_\_\_\_

Lab Use Only		TAT				EPA Program	
Lab WO#	Job Number	1D	2D	3D	Standard	CWA	SDWA
E405076	19031-0001		X				
Analysis and Method							RCRA

State					
NM	CO	UT	AZ	TX	

Additional Instructions: *NRM2026231125*

I, (field sampler), attest to the validity and authenticity of this sample. I am aware that tampering with or intentionally mislabelling the sample location, date or time of collection is considered fraud and may be grounds for legal action.	Sampled by:	Samples requiring thermal preservation must be received on ice the day they are sampled or received and packed in ice at an avg temp above 0 but less than 6 °C on subsequent days.
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Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time	Lab Use Only Received on ice: <input checked="" type="radio"/> Y <input type="radio"/> N T1 _____ T2 _____ T3 _____ AVG Temp °C <u>4</u>
<i>[Signature]</i>	5/6/24	10:07	Michelle Gonzales	5-6-24	1007	
Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time	
Michelle Gonzales	5-6-24	1705	<i>[Signature]</i>	5-6-24	1705	
Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time	
<i>[Signature]</i>	5-6-24	2400	Kristen P. Hall	5-7-24	0500	

Sample Matrix: **S** - Soil, **Sd** - Solid, **Sg** - Sludge, **A** - Aqueous, **O** - Other \_\_\_\_\_

Note: Samples are discarded 30 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at the client expense. The report for the analysis of the above samples is applicable only to those samples received by the laboratory with this COC. The liability of the laboratory is limited to the amount paid for on the report.



## Envirotech Analytical Laboratory

Printed: 5/7/2024 9:11:40AM

## Sample Receipt Checklist (SRC)

Instructions: Please take note of any NO checkmarks.

If we receive no response concerning these items within 24 hours of the date of this notice, all the samples will be analyzed as requested.

Client: Vertex Resource Services Inc.

Date Received: 05/07/24 05:00

Work Order ID: E405076

Phone: (575) 748-0176

Date Logged In: 05/06/24 15:59

Logged In By: Angelina Pineda

Email: cdixon@vertex.ca

Due Date: 05/08/24 17:00 (1 day TAT)

Chain of Custody (COC)

1. Does the sample ID match the COC? Yes
2. Does the number of samples per sampling site location match the COC? Yes
3. Were samples dropped off by client or carrier? Yes
4. Was the COC complete, i.e., signatures, dates/times, requested analyses? Yes
5. Were all samples received within holding time? Yes

Note: Analysis, such as pH which should be conducted in the field, i.e., 15 minute hold time, are not included in this discussion.

Carrier: CourierSample Turn Around Time (TAT)

6. Did the COC indicate standard TAT, or Expedited TAT? Yes

Sample Cooler

7. Was a sample cooler received? Yes
8. If yes, was cooler received in good condition? Yes
9. Was the sample(s) received intact, i.e., not broken? Yes
10. Were custody/security seals present? No
11. If yes, were custody/security seals intact? NA
12. Was the sample received on ice? If yes, the recorded temp is 4°C, i.e., 6°±2°C Yes

Note: Thermal preservation is not required, if samples are received w/i 15 minutes of sampling

13. If no visible ice, record the temperature. Actual sample temperature: 4°C

Sample Container

14. Are aqueous VOC samples present? No
15. Are VOC samples collected in VOA Vials? NA
16. Is the head space less than 6-8 mm (pea sized or less)? NA
17. Was a trip blank (TB) included for VOC analyses? NA
18. Are non-VOC samples collected in the correct containers? Yes
19. Is the appropriate volume/weight or number of sample containers collected? Yes

Field Label

20. Were field sample labels filled out with the minimum information:

Sample ID? Yes

Date/Time Collected? Yes

Collectors name? Yes

Sample Preservation

21. Does the COC or field labels indicate the samples were preserved? No
22. Are sample(s) correctly preserved? NA
24. Is lab filtration required and/or requested for dissolved metals? No

Multiphase Sample Matrix

26. Does the sample have more than one phase, i.e., multiphase? No
27. If yes, does the COC specify which phase(s) is to be analyzed? NA

Subcontract Laboratory

28. Are samples required to get sent to a subcontract laboratory? No
29. Was a subcontract laboratory specified by the client and if so who? NA Subcontract Lab: NA

Client InstructionComments/Resolution

Signature of client authorizing changes to the COC or sample disposition.

Date



envirotech Inc.

Report to:  
Chance Dixon



# envirotech

*Practical Solutions for a Better Tomorrow*

## Analytical Report

Vertex Resource Services Inc.

Project Name: Zeus SWD Line

Work Order: E405075

Job Number: 19031-0001

Received: 5/7/2024

Revision: 1

Report Reviewed By:

Walter Hinchman  
Laboratory Director  
5/8/24

5796 U.S. Hwy 64  
Farmington, NM 87401

Phone: (505) 632-1881  
Envirotech-inc.com



Envirotech Inc. certifies the test results meet all requirements of TNI unless noted otherwise.  
Statement of Data Authenticity: Envirotech Inc. attests the data reported has not been altered in any way.  
Partial or incomplete reproduction of this report is prohibited, unless approved by Envirotech Inc.  
Envirotech Inc. holds the Utah TNI certification NM00979 for data reported.  
Envirotech Inc. holds the Texas TNI certification T104704557 for data reported.

Date Reported: 5/8/24

Chance Dixon  
3101 Boyd Drive  
Carlsbad, NM 88220



Project Name: Zeus SWD Line  
Workorder: E405075  
Date Received: 5/7/2024 5:00:00AM

Chance Dixon,

Thank you for choosing Envirotech, Inc. as your analytical testing laboratory for the sample(s) received on, 5/7/2024 5:00:00AM, under the Project Name: Zeus SWD Line.

The analytical test results summarized in this report with the Project Name: Zeus SWD Line apply to the individual samples collected, identified and submitted bearing the project name on the enclosed chain-of-custody. Subcontracted sample analyses not conducted by Envirotech, Inc., are attached in full as issued by the subcontract laboratory.

Please review the Chain-of-Custody (COC) and Sample Receipt Checklist (SRC) for any issues regarding sample receipt temperature, containers, preservation etc. To best understand your test results, review the entire report summarizing your sample data and the associated quality control batch data.

All reported data in this analytical report were analyzed according to the referenced method(s) and are in compliance with the latest NELAC/TNI standards, unless otherwise noted. Samples or analytical quality control parameters not meeting specific QC criteria are qualified with a data flag. Data flag definitions are located in the Notes and Definitions section of this analytical report.

If you have any questions concerning this report, please feel free to contact Envirotech, Inc.

Respectfully,

**Walter Hinchman**  
Laboratory Director  
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Cell: 775-287-1762  
[whinchman@envirotech-inc.com](mailto:whinchman@envirotech-inc.com)

**Raina Schwanz**  
Laboratory Administrator  
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**Alexa Michaels**  
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Envirotech Web Address: [www.envirotech-inc.com](http://www.envirotech-inc.com)

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Sample Summary

Vertex Resource Services Inc. 3101 Boyd Drive Carlsbad NM, 88220	Project Name: Zeus SWD Line Project Number: 19031-0001 Project Manager: Chance Dixon	Reported: 05/08/24 12:48
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Client Sample ID	Lab Sample ID	Matrix	Sampled	Received	Container
WS24-23 4.0'	E405075-01A	Soil	05/04/24	05/07/24	Glass Jar, 2 oz.
WS24-24 4.0'	E405075-02A	Soil	05/04/24	05/07/24	Glass Jar, 2 oz.
WS24-25 4.0'	E405075-03A	Soil	05/04/24	05/07/24	Glass Jar, 2 oz.
WS24-26 4.0'	E405075-04A	Soil	05/04/24	05/07/24	Glass Jar, 2 oz.





Sample Data

Vertex Resource Services Inc. 3101 Boyd Drive Carlsbad NM, 88220	Project Name: Zeus SWD Line Project Number: 19031-0001 Project Manager: Chance Dixon	Reported: 5/8/2024 12:48:58PM
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WS24-23 4.0'  
E405075-01

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
<b>Volatile Organics by EPA 8021B</b>	mg/kg	mg/kg	Analyst: BA		Batch: 2419059	
Benzene	ND	0.0250	1	05/07/24	05/07/24	
Ethylbenzene	ND	0.0250	1	05/07/24	05/07/24	
Toluene	ND	0.0250	1	05/07/24	05/07/24	
o-Xylene	ND	0.0250	1	05/07/24	05/07/24	
p,m-Xylene	ND	0.0500	1	05/07/24	05/07/24	
Total Xylenes	ND	0.0250	1	05/07/24	05/07/24	
Surrogate: 4-Bromochlorobenzene-PID	92.7 %	70-130		05/07/24	05/07/24	
<b>Nonhalogenated Organics by EPA 8015D - GRO</b>	mg/kg	mg/kg	Analyst: BA		Batch: 2419059	
Gasoline Range Organics (C6-C10)	ND	20.0	1	05/07/24	05/07/24	
Surrogate: 1-Chloro-4-fluorobenzene-FID	101 %	70-130		05/07/24	05/07/24	
<b>Nonhalogenated Organics by EPA 8015D - DRO/ORO</b>	mg/kg	mg/kg	Analyst: KM		Batch: 2419058	
Diesel Range Organics (C10-C28)	ND	25.0	1	05/07/24	05/07/24	
Oil Range Organics (C28-C36)	ND	50.0	1	05/07/24	05/07/24	
Surrogate: n-Nonane	115 %	50-200		05/07/24	05/07/24	
<b>Anions by EPA 300.0/9056A</b>	mg/kg	mg/kg	Analyst: IY		Batch: 2419056	
Chloride	1090	20.0	1	05/07/24	05/07/24	



Sample Data

Vertex Resource Services Inc. 3101 Boyd Drive Carlsbad NM, 88220	Project Name: Zeus SWD Line Project Number: 19031-0001 Project Manager: Chance Dixon	Reported: 5/8/2024 12:48:58PM
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WS24-24 4.0'  
E405075-02

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
<b>Volatile Organics by EPA 8021B</b>						
	mg/kg	mg/kg	Analyst: BA		Batch: 2419059	
Benzene	ND	0.0250	1	05/07/24	05/07/24	
Ethylbenzene	ND	0.0250	1	05/07/24	05/07/24	
Toluene	ND	0.0250	1	05/07/24	05/07/24	
o-Xylene	ND	0.0250	1	05/07/24	05/07/24	
p,m-Xylene	ND	0.0500	1	05/07/24	05/07/24	
Total Xylenes	ND	0.0250	1	05/07/24	05/07/24	
<i>Surrogate: 4-Bromochlorobenzene-PID</i>						
	91.8 %	70-130		05/07/24	05/07/24	
<b>Nonhalogenated Organics by EPA 8015D - GRO</b>						
	mg/kg	mg/kg	Analyst: BA		Batch: 2419059	
Gasoline Range Organics (C6-C10)	ND	20.0	1	05/07/24	05/07/24	
<i>Surrogate: 1-Chloro-4-fluorobenzene-FID</i>						
	100 %	70-130		05/07/24	05/07/24	
<b>Nonhalogenated Organics by EPA 8015D - DRO/ORO</b>						
	mg/kg	mg/kg	Analyst: KM		Batch: 2419058	
Diesel Range Organics (C10-C28)	ND	25.0	1	05/07/24	05/07/24	
Oil Range Organics (C28-C36)	ND	50.0	1	05/07/24	05/07/24	
<i>Surrogate: n-Nonane</i>						
	105 %	50-200		05/07/24	05/07/24	
<b>Anions by EPA 300.0/9056A</b>						
	mg/kg	mg/kg	Analyst: IY		Batch: 2419056	
Chloride	182	20.0	1	05/07/24	05/07/24	



Sample Data

Vertex Resource Services Inc. 3101 Boyd Drive Carlsbad NM, 88220	Project Name: Zeus SWD Line Project Number: 19031-0001 Project Manager: Chance Dixon	Reported: 5/8/2024 12:48:58PM
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WS24-25 4.0'  
E405075-03

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
<b>Volatile Organics by EPA 8021B</b>						
	mg/kg	mg/kg	Analyst: BA		Batch: 2419059	
Benzene	ND	0.0250	1	05/07/24	05/07/24	
Ethylbenzene	ND	0.0250	1	05/07/24	05/07/24	
Toluene	ND	0.0250	1	05/07/24	05/07/24	
o-Xylene	ND	0.0250	1	05/07/24	05/07/24	
p,m-Xylene	ND	0.0500	1	05/07/24	05/07/24	
Total Xylenes	ND	0.0250	1	05/07/24	05/07/24	
<i>Surrogate: 4-Bromochlorobenzene-PID</i>						
	92.4 %	70-130		05/07/24	05/07/24	
<b>Nonhalogenated Organics by EPA 8015D - GRO</b>						
	mg/kg	mg/kg	Analyst: BA		Batch: 2419059	
Gasoline Range Organics (C6-C10)	ND	20.0	1	05/07/24	05/07/24	
<i>Surrogate: 1-Chloro-4-fluorobenzene-FID</i>						
	99.6 %	70-130		05/07/24	05/07/24	
<b>Nonhalogenated Organics by EPA 8015D - DRO/ORO</b>						
	mg/kg	mg/kg	Analyst: KM		Batch: 2419058	
Diesel Range Organics (C10-C28)	ND	25.0	1	05/07/24	05/07/24	
Oil Range Organics (C28-C36)	ND	50.0	1	05/07/24	05/07/24	
<i>Surrogate: n-Nonane</i>						
	103 %	50-200		05/07/24	05/07/24	
<b>Anions by EPA 300.0/9056A</b>						
	mg/kg	mg/kg	Analyst: IY		Batch: 2419056	
Chloride	909	20.0	1	05/07/24	05/07/24	



Sample Data

Vertex Resource Services Inc. 3101 Boyd Drive Carlsbad NM, 88220	Project Name: Zeus SWD Line Project Number: 19031-0001 Project Manager: Chance Dixon	Reported: 5/8/2024 12:48:58PM
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WS24-26 4.0'  
E405075-04

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
<b>Volatile Organics by EPA 8021B</b>						
	mg/kg	mg/kg	Analyst: BA		Batch: 2419059	
Benzene	ND	0.0250	1	05/07/24	05/07/24	
Ethylbenzene	ND	0.0250	1	05/07/24	05/07/24	
Toluene	ND	0.0250	1	05/07/24	05/07/24	
o-Xylene	ND	0.0250	1	05/07/24	05/07/24	
p,m-Xylene	ND	0.0500	1	05/07/24	05/07/24	
Total Xylenes	ND	0.0250	1	05/07/24	05/07/24	
<i>Surrogate: 4-Bromochlorobenzene-PID</i>						
	92.9 %	70-130		05/07/24	05/07/24	
<b>Nonhalogenated Organics by EPA 8015D - GRO</b>						
	mg/kg	mg/kg	Analyst: BA		Batch: 2419059	
Gasoline Range Organics (C6-C10)	ND	20.0	1	05/07/24	05/07/24	
<i>Surrogate: 1-Chloro-4-fluorobenzene-FID</i>						
	101 %	70-130		05/07/24	05/07/24	
<b>Nonhalogenated Organics by EPA 8015D - DRO/ORO</b>						
	mg/kg	mg/kg	Analyst: KM		Batch: 2419058	
Diesel Range Organics (C10-C28)	ND	25.0	1	05/07/24	05/07/24	
Oil Range Organics (C28-C36)	ND	50.0	1	05/07/24	05/07/24	
<i>Surrogate: n-Nonane</i>						
	104 %	50-200		05/07/24	05/07/24	
<b>Anions by EPA 300.0/9056A</b>						
	mg/kg	mg/kg	Analyst: IY		Batch: 2419056	
Chloride	374	20.0	1	05/07/24	05/07/24	



QC Summary Data

Vertex Resource Services Inc. 3101 Boyd Drive Carlsbad NM, 88220	Project Name: Zeus SWD Line Project Number: 19031-0001 Project Manager: Chance Dixon	Reported:  5/8/2024 12:48:58PM
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Volatile Organics by EPA 8021B

Analyst: BA

Analyte	Result mg/kg	Reporting Limit mg/kg	Spike Level mg/kg	Source Result mg/kg	Rec %	Rec Limits %	RPD %	RPD Limit %	Notes
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Blank (2419059-BLK1) Prepared: 05/07/24 Analyzed: 05/07/24

Benzene	ND	0.0250							
Ethylbenzene	ND	0.0250							
Toluene	ND	0.0250							
o-Xylene	ND	0.0250							
p,m-Xylene	ND	0.0500							
Total Xylenes	ND	0.0250							
Surrogate: 4-Bromochlorobenzene-PID	7.56		8.00		94.4	70-130			

LCS (2419059-BS1) Prepared: 05/07/24 Analyzed: 05/07/24

Benzene	5.24	0.0250	5.00		105	70-130			
Ethylbenzene	4.97	0.0250	5.00		99.5	70-130			
Toluene	5.18	0.0250	5.00		104	70-130			
o-Xylene	5.08	0.0250	5.00		102	70-130			
p,m-Xylene	10.2	0.0500	10.0		102	70-130			
Total Xylenes	15.3	0.0250	15.0		102	70-130			
Surrogate: 4-Bromochlorobenzene-PID	7.61		8.00		95.1	70-130			

Matrix Spike (2419059-MS1) Source: E405086-03 Prepared: 05/07/24 Analyzed: 05/07/24

Benzene	5.56	0.0250	5.00	ND	111	54-133			
Ethylbenzene	5.26	0.0250	5.00	ND	105	61-133			
Toluene	5.50	0.0250	5.00	ND	110	61-130			
o-Xylene	5.36	0.0250	5.00	ND	107	63-131			
p,m-Xylene	10.8	0.0500	10.0	ND	108	63-131			
Total Xylenes	16.2	0.0250	15.0	ND	108	63-131			
Surrogate: 4-Bromochlorobenzene-PID	7.53		8.00		94.1	70-130			

Matrix Spike Dup (2419059-MSD1) Source: E405086-03 Prepared: 05/07/24 Analyzed: 05/07/24

Benzene	5.33	0.0250	5.00	ND	107	54-133	4.20	20	
Ethylbenzene	5.04	0.0250	5.00	ND	101	61-133	4.29	20	
Toluene	5.26	0.0250	5.00	ND	105	61-130	4.40	20	
o-Xylene	5.14	0.0250	5.00	ND	103	63-131	4.28	20	
p,m-Xylene	10.4	0.0500	10.0	ND	104	63-131	4.37	20	
Total Xylenes	15.5	0.0250	15.0	ND	103	63-131	4.34	20	
Surrogate: 4-Bromochlorobenzene-PID	7.49		8.00		93.6	70-130			





QC Summary Data

Vertex Resource Services Inc.	Project Name:	Zeus SWD Line	Reported:
3101 Boyd Drive	Project Number:	19031-0001	
Carlsbad NM, 88220	Project Manager:	Chance Dixon	5/8/2024 12:48:58PM

Nonhalogenated Organics by EPA 8015D - GRO

Analyst: BA

Analyte	Result mg/kg	Reporting Limit mg/kg	Spike Level mg/kg	Source Result mg/kg	Rec %	Rec Limits %	RPD %	RPD Limit %	Notes
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Blank (2419059-BLK1) Prepared: 05/07/24 Analyzed: 05/07/24

Gasoline Range Organics (C6-C10)	ND	20.0							
Surrogate: 1-Chloro-4-fluorobenzene-FID	7.97		8.00		99.6	70-130			

LCS (2419059-BS2) Prepared: 05/07/24 Analyzed: 05/07/24

Gasoline Range Organics (C6-C10)	51.4	20.0	50.0		103	70-130			
Surrogate: 1-Chloro-4-fluorobenzene-FID	8.08		8.00		101	70-130			

Matrix Spike (2419059-MS2) Source: E405086-03 Prepared: 05/07/24 Analyzed: 05/07/24

Gasoline Range Organics (C6-C10)	48.6	20.0	50.0	ND	97.1	70-130			
Surrogate: 1-Chloro-4-fluorobenzene-FID	8.12		8.00		101	70-130			

Matrix Spike Dup (2419059-MSD2) Source: E405086-03 Prepared: 05/07/24 Analyzed: 05/07/24

Gasoline Range Organics (C6-C10)	50.2	20.0	50.0	ND	100	70-130	3.24	20	
Surrogate: 1-Chloro-4-fluorobenzene-FID	8.21		8.00		103	70-130			



QC Summary Data

Vertex Resource Services Inc.	Project Name:	Zeus SWD Line	Reported:
3101 Boyd Drive	Project Number:	19031-0001	
Carlsbad NM, 88220	Project Manager:	Chance Dixon	5/8/2024 12:48:58PM

Nonhalogenated Organics by EPA 8015D - DRO/ORO

Analyst: KM

Analyte	Result mg/kg	Reporting Limit mg/kg	Spike Level mg/kg	Source Result mg/kg	Rec %	Rec Limits %	RPD %	RPD Limit %	Notes
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Blank (2419058-BLK1)					Prepared: 05/07/24 Analyzed: 05/07/24				
Diesel Range Organics (C10-C28)	ND	25.0							
Oil Range Organics (C28-C36)	ND	50.0							
Surrogate: n-Nonane	52.1		50.0		104	50-200			

LCS (2419058-BS1)					Prepared: 05/07/24 Analyzed: 05/07/24				
Diesel Range Organics (C10-C28)	303	25.0	250		121	38-132			
Surrogate: n-Nonane	52.3		50.0		105	50-200			

LCS Dup (2419058-BSD1)					Prepared: 05/07/24 Analyzed: 05/07/24				
Diesel Range Organics (C10-C28)	278	25.0	250		111	38-132	8.61	20	
Surrogate: n-Nonane	51.0		50.0		102	50-200			



QC Summary Data

Vertex Resource Services Inc.	Project Name:	Zeus SWD Line	Reported:
3101 Boyd Drive	Project Number:	19031-0001	
Carlsbad NM, 88220	Project Manager:	Chance Dixon	5/8/2024 12:48:58PM

Anions by EPA 300.0/9056A

Analyst: IY

Analyte	Result	Reporting Limit	Spike Level	Source Result	Rec	Rec Limits	RPD	RPD Limit	Notes
	mg/kg	mg/kg	mg/kg	mg/kg	%	%	%	%	

Blank (2419056-BLK1)					Prepared: 05/07/24 Analyzed: 05/07/24				
Chloride	ND	20.0							
LCS (2419056-BS1)					Prepared: 05/07/24 Analyzed: 05/07/24				
Chloride	254	20.0	250		101	90-110			
LCS Dup (2419056-BSD1)					Prepared: 05/07/24 Analyzed: 05/07/24				
Chloride	258	20.0	250		103	90-110	1.66	20	

QC Summary Report Comment:  
Calculations are based off of the raw (non-rounded) data. However, for reporting purposes all QC data is rounded to three significant figures.  
Therefore, hand calculated values may differ slightly.



Definitions and Notes

Vertex Resource Services Inc.	Project Name:	Zeus SWD Line	
3101 Boyd Drive	Project Number:	19031-0001	Reported:
Carlsbad NM, 88220	Project Manager:	Chance Dixon	05/08/24 12:48

- ND      Analyte NOT DETECTED at or above the reporting limit
- NR      Not Reported
- RPD      Relative Percent Difference
- DNI      Did Not Ignite
- DNR      Did not react with the addition of acid or base.
- Note (1): Methods marked with \*\* are non-accredited methods.
- Note (2): Soil data is reported on an "as received" weight basis, unless reported otherwise.



## Chain of Custody

Page 1 of 1

Client Information				Invoice Information				Lab Use Only				TAT				State			
Client: <u>Vertex</u>				Company: <u>Top Rock Resources</u>				Lab WP# <u>E 405075</u>		Job Number <u>19031-0001</u>		1D	2D	3D	Std	NM	CO	UT	TX
Project Name: <u>Zeus SWD Line</u>				Address:									<input checked="" type="checkbox"/>						
Project Manager: <u>Chance Dixon</u>				City, State, Zip:															
Address:				Phone:															
City, State, Zip:				Email:															
Phone:				Miscellaneous:															
Email:																			

Sample Information										Analysis and Method										EPA Program		
Time Sampled	Date Sampled	Matrix	No. of Containers	Sample ID		Field Filter	Lab Number	DRO/ORO by 8015	GRO/DRO by 8015	BTEX by 4021	VOC by 8260	Chloride 300.0	BGDOC - NM	TCEQ 1005 - TX	RCRA 8 Metals	SDWA	CWA	RCRA				
0900	5-4-24	Soil	1	WS24-23	4.0'		1															
0910	↓	↓	↓	WS24-24	4.0'		2															
0920	↓	↓	↓	WS24-25	4.0'		3															
0930	↓	↓	↓	WS24-26	4.0'		4															

**Additional Instructions:** NRM2026231125

I, (field sampler), attest to the validity and authenticity of this sample. I am aware that tampering with or intentionally mislabeling the sample location, date or time of collection is considered fraud and may be grounds for legal action.

Sampled by: <u>[Signature]</u>		Relinquished by: (Signature)		Date		Time		Received by: (Signature)		Date		Time		Samples requiring thermal preservation must be received on ice the day they are sampled or received packed in ice at an avg temp above 0 but less than 5C on subsequent days.  Lab Use Only Received on ice: <input checked="" type="checkbox"/> Y / N  T1 _____ T2 _____ T3 _____  AVG Temp °C <u>4</u>
Relinquished by: (Signature)		Date		Time		Received by: (Signature)		Date		Time				
Relinquished by: (Signature)		Date		Time		Received by: (Signature)		Date		Time				
Relinquished by: (Signature)		Date		Time		Received by: (Signature)		Date		Time				

Sample Matrix: S - Soil, Sd - Solid, Sg - Sludge, A - Aqueous, O - Other \_\_\_\_\_ Container Type: g - glass, p - poly/plastic, ag - amber glass, v - VOA \_\_\_\_\_

Note: Samples are discarded 14 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at the client expense. The report for the analysis of the above samples is applicable only to those samples received by the laboratory with this COC. The liability of the laboratory is limited to the amount paid for on the report.



envirotech



## Envirotech Analytical Laboratory

Printed: 5/7/2024 9:04:38AM

## Sample Receipt Checklist (SRC)

Instructions: Please take note of any NO checkmarks.

If we receive no response concerning these items within 24 hours of the date of this notice, all the samples will be analyzed as requested.

Client: Vertex Resource Services Inc.

Date Received: 05/07/24 05:00

Work Order ID: E405075

Phone: (575) 748-0176

Date Logged In: 05/06/24 15:54

Logged In By: Angelina Pineda

Email: cdixon@vertex.ca

Due Date: 05/08/24 17:00 (1 day TAT)

Chain of Custody (COC)

1. Does the sample ID match the COC? Yes
2. Does the number of samples per sampling site location match the COC? Yes
3. Were samples dropped off by client or carrier? Yes
4. Was the COC complete, i.e., signatures, dates/times, requested analyses? Yes
5. Were all samples received within holding time? Yes

Carrier: Courier

Note: Analysis, such as pH which should be conducted in the field, i.e., 15 minute hold time, are not included in this discussion.

Sample Turn Around Time (TAT)

6. Did the COC indicate standard TAT, or Expedited TAT? Yes

Sample Cooler

7. Was a sample cooler received? Yes
8. If yes, was cooler received in good condition? Yes
9. Was the sample(s) received intact, i.e., not broken? Yes
10. Were custody/security seals present? No
11. If yes, were custody/security seals intact? NA
12. Was the sample received on ice? If yes, the recorded temp is 4°C, i.e., 6°±2°C Yes

Note: Thermal preservation is not required, if samples are received w/i 15 minutes of sampling

13. If no visible ice, record the temperature. Actual sample temperature: 4°C

Sample Container

14. Are aqueous VOC samples present? No
15. Are VOC samples collected in VOA Vials? NA
16. Is the head space less than 6-8 mm (pea sized or less)? NA
17. Was a trip blank (TB) included for VOC analyses? NA
18. Are non-VOC samples collected in the correct containers? Yes
19. Is the appropriate volume/weight or number of sample containers collected? Yes

Field Label

20. Were field sample labels filled out with the minimum information:

Sample ID? Yes

Date/Time Collected? Yes

Collectors name? Yes

Sample Preservation

21. Does the COC or field labels indicate the samples were preserved? No
22. Are sample(s) correctly preserved? NA
24. Is lab filtration required and/or requested for dissolved metals? No

Multiphase Sample Matrix

26. Does the sample have more than one phase, i.e., multiphase? No
27. If yes, does the COC specify which phase(s) is to be analyzed? NA

Subcontract Laboratory

28. Are samples required to get sent to a subcontract laboratory? No
29. Was a subcontract laboratory specified by the client and if so who? NA Subcontract Lab: NA

Client InstructionComments/Resolution

Signature of client authorizing changes to the COC or sample disposition.

Date



envirotech Inc.

Report to:  
Chance Dixon



# envirotech

*Practical Solutions for a Better Tomorrow*

## Analytical Report

Vertex Resource Services Inc.

Project Name: Zeus SWD Line

Work Order: E405106

Job Number: 24015-0003

Received: 5/8/2024

Revision: 1

Report Reviewed By:

Walter Hinchman  
Laboratory Director  
5/14/24

5796 U.S. Hwy 64  
Farmington, NM 87401

Phone: (505) 632-1881  
Envirotech-inc.com



Envirotech Inc. certifies the test results meet all requirements of TNI unless noted otherwise.  
Statement of Data Authenticity: Envirotech Inc. attests the data reported has not been altered in any way.  
Partial or incomplete reproduction of this report is prohibited, unless approved by Envirotech Inc.  
Envirotech Inc. holds the Utah TNI certification NM00979 for data reported.  
Envirotech Inc. holds the Texas TNI certification T104704557 for data reported.

Date Reported: 5/14/24

Chance Dixon  
3101 Boyd Drive  
Carlsbad, NM 88220



Project Name: Zeus SWD Line  
Workorder: E405106  
Date Received: 5/8/2024 5:00:00AM

Chance Dixon,

Thank you for choosing Envirotech, Inc. as your analytical testing laboratory for the sample(s) received on, 5/8/2024 5:00:00AM, under the Project Name: Zeus SWD Line.

The analytical test results summarized in this report with the Project Name: Zeus SWD Line apply to the individual samples collected, identified and submitted bearing the project name on the enclosed chain-of-custody. Subcontracted sample analyses not conducted by Envirotech, Inc., are attached in full as issued by the subcontract laboratory.

Please review the Chain-of-Custody (COC) and Sample Receipt Checklist (SRC) for any issues regarding sample receipt temperature, containers, preservation etc. To best understand your test results, review the entire report summarizing your sample data and the associated quality control batch data.

All reported data in this analytical report were analyzed according to the referenced method(s) and are in compliance with the latest NELAC/TNI standards, unless otherwise noted. Samples or analytical quality control parameters not meeting specific QC criteria are qualified with a data flag. Data flag definitions are located in the Notes and Definitions section of this analytical report.

If you have any questions concerning this report, please feel free to contact Envirotech, Inc.

Respectfully,

**Walter Hinchman**  
Laboratory Director  
Office: 505-632-1881  
Cell: 775-287-1762  
[whinchman@envirotech-inc.com](mailto:whinchman@envirotech-inc.com)

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**Alexa Michaels**  
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[mgonzales@envirotech-inc.com](mailto:mgonzales@envirotech-inc.com)

Envirotech Web Address: [www.envirotech-inc.com](http://www.envirotech-inc.com)

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Sample Summary

Vertex Resource Services Inc.	Project Name:	Zeus SWD Line	Reported:
3101 Boyd Drive	Project Number:	24015-0003	
Carlsbad NM, 88220	Project Manager:	Chance Dixon	05/14/24 13:51

Client Sample ID	Lab Sample ID	Matrix	Sampled	Received	Container
WES24 - 27 0-4FT	E405106-01A	Soil	05/06/24	05/08/24	Glass Jar, 4 oz.





Sample Data

Vertex Resource Services Inc. 3101 Boyd Drive Carlsbad NM, 88220	Project Name: Zeus SWD Line Project Number: 24015-0003 Project Manager: Chance Dixon	Reported: 5/14/2024 1:51:29PM
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WES24 - 27 0-4FT

E405106-01

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
<b>Volatile Organic Compounds by EPA 8260B</b>						
	mg/kg	mg/kg	Analyst: EG		Batch: 2419118	
Benzene	ND	0.0250	1	05/08/24	05/12/24	
Ethylbenzene	ND	0.0250	1	05/08/24	05/12/24	
Toluene	ND	0.0250	1	05/08/24	05/12/24	
o-Xylene	ND	0.0250	1	05/08/24	05/12/24	
p,m-Xylene	ND	0.0500	1	05/08/24	05/12/24	
Total Xylenes	ND	0.0250	1	05/08/24	05/12/24	
Surrogate: Bromofluorobenzene		109 %	70-130	05/08/24	05/12/24	
Surrogate: 1,2-Dichloroethane-d4		100 %	70-130	05/08/24	05/12/24	
Surrogate: Toluene-d8		104 %	70-130	05/08/24	05/12/24	
<b>Nonhalogenated Organics by EPA 8015D - GRO</b>						
	mg/kg	mg/kg	Analyst: EG		Batch: 2419118	
Gasoline Range Organics (C6-C10)	ND	20.0	1	05/08/24	05/12/24	
Surrogate: Bromofluorobenzene		109 %	70-130	05/08/24	05/12/24	
Surrogate: 1,2-Dichloroethane-d4		100 %	70-130	05/08/24	05/12/24	
Surrogate: Toluene-d8		104 %	70-130	05/08/24	05/12/24	
<b>Nonhalogenated Organics by EPA 8015D - DRO/ORO</b>						
	mg/kg	mg/kg	Analyst: KM		Batch: 2419180	
Diesel Range Organics (C10-C28)	ND	25.0	1	05/10/24	05/13/24	
Oil Range Organics (C28-C36)	ND	50.0	1	05/10/24	05/13/24	
Surrogate: n-Nonane		111 %	50-200	05/10/24	05/13/24	
<b>Anions by EPA 300.0/9056A</b>						
	mg/kg	mg/kg	Analyst: IY		Batch: 2420020	
Chloride	552	20.0	1	05/13/24	05/14/24	



QC Summary Data

Vertex Resource Services Inc.	Project Name:	Zeus SWD Line	Reported:
3101 Boyd Drive	Project Number:	24015-0003	
Carlsbad NM, 88220	Project Manager:	Chance Dixon	5/14/2024 1:51:29PM

Volatile Organic Compounds by EPA 8260B

Analyst: EG

Analyte	Result	Reporting Limit	Spike Level	Source Result	Rec	Rec Limits	RPD	RPD Limit	Notes
	mg/kg	mg/kg	mg/kg	mg/kg	%	%	%	%	

Blank (2419118-BLK1) Prepared: 05/08/24 Analyzed: 05/12/24

Benzene	ND	0.0250							
Ethylbenzene	ND	0.0250							
Toluene	ND	0.0250							
o-Xylene	ND	0.0250							
p,m-Xylene	ND	0.0500							
Total Xylenes	ND	0.0250							
Surrogate: Bromofluorobenzene	0.532		0.500		106	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.495		0.500		98.9	70-130			
Surrogate: Toluene-d8	0.521		0.500		104	70-130			

LCS (2419118-BS1) Prepared: 05/08/24 Analyzed: 05/12/24

Benzene	2.37	0.0250	2.50		94.8	70-130			
Ethylbenzene	2.65	0.0250	2.50		106	70-130			
Toluene	2.49	0.0250	2.50		99.5	70-130			
o-Xylene	2.67	0.0250	2.50		107	70-130			
p,m-Xylene	5.38	0.0500	5.00		108	70-130			
Total Xylenes	8.05	0.0250	7.50		107	70-130			
Surrogate: Bromofluorobenzene	0.540		0.500		108	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.494		0.500		98.8	70-130			
Surrogate: Toluene-d8	0.527		0.500		105	70-130			

Matrix Spike (2419118-MS1) Source: E405104-03 Prepared: 05/08/24 Analyzed: 05/12/24

Benzene	2.40	0.0250	2.50	ND	96.1	48-131			
Ethylbenzene	2.67	0.0250	2.50	ND	107	45-135			
Toluene	2.52	0.0250	2.50	ND	101	48-130			
o-Xylene	2.77	0.0250	2.50	ND	111	43-135			
p,m-Xylene	5.55	0.0500	5.00	ND	111	43-135			
Total Xylenes	8.32	0.0250	7.50	ND	111	43-135			
Surrogate: Bromofluorobenzene	0.534		0.500		107	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.484		0.500		96.7	70-130			
Surrogate: Toluene-d8	0.525		0.500		105	70-130			

Matrix Spike Dup (2419118-MSD1) Source: E405104-03 Prepared: 05/08/24 Analyzed: 05/12/24

Benzene	2.43	0.0250	2.50	ND	97.0	48-131	0.994	23	
Ethylbenzene	2.67	0.0250	2.50	ND	107	45-135	0.112	27	
Toluene	2.51	0.0250	2.50	ND	101	48-130	0.298	24	
o-Xylene	2.84	0.0250	2.50	ND	114	43-135	2.41	27	
p,m-Xylene	5.67	0.0500	5.00	ND	113	43-135	2.09	27	
Total Xylenes	8.51	0.0250	7.50	ND	113	43-135	2.19	27	
Surrogate: Bromofluorobenzene	0.531		0.500		106	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.488		0.500		97.6	70-130			
Surrogate: Toluene-d8	0.516		0.500		103	70-130			



QC Summary Data

Vertex Resource Services Inc. 3101 Boyd Drive Carlsbad NM, 88220	Project Name: Zeus SWD Line Project Number: 24015-0003 Project Manager: Chance Dixon	Reported:  5/14/2024 1:51:29PM
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Nonhalogenated Organics by EPA 8015D - GRO

Analyst: EG

Analyte	Result mg/kg	Reporting Limit mg/kg	Spike Level mg/kg	Source Result mg/kg	Rec %	Rec Limits %	RPD %	RPD Limit %	Notes
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Blank (2419118-BLK1) Prepared: 05/08/24 Analyzed: 05/12/24

Gasoline Range Organics (C6-C10)	ND	20.0							
Surrogate: Bromofluorobenzene	0.532		0.500		106	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.495		0.500		98.9	70-130			
Surrogate: Toluene-d8	0.521		0.500		104	70-130			

LCS (2419118-BS2) Prepared: 05/08/24 Analyzed: 05/12/24

Gasoline Range Organics (C6-C10)	45.4	20.0	50.0		90.9	70-130			
Surrogate: Bromofluorobenzene	0.544		0.500		109	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.490		0.500		97.9	70-130			
Surrogate: Toluene-d8	0.523		0.500		105	70-130			

Matrix Spike (2419118-MS2) Source: E405104-03 Prepared: 05/08/24 Analyzed: 05/12/24

Gasoline Range Organics (C6-C10)	49.5	20.0	50.0	ND	98.9	70-130			
Surrogate: Bromofluorobenzene	0.534		0.500		107	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.484		0.500		96.7	70-130			
Surrogate: Toluene-d8	0.513		0.500		103	70-130			

Matrix Spike Dup (2419118-MSD2) Source: E405104-03 Prepared: 05/08/24 Analyzed: 05/12/24

Gasoline Range Organics (C6-C10)	49.0	20.0	50.0	ND	98.1	70-130	0.868	20	
Surrogate: Bromofluorobenzene	0.530		0.500		106	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.484		0.500		96.8	70-130			
Surrogate: Toluene-d8	0.527		0.500		105	70-130			



QC Summary Data

Vertex Resource Services Inc. 3101 Boyd Drive Carlsbad NM, 88220	Project Name: Zeus SWD Line Project Number: 24015-0003 Project Manager: Chance Dixon	Reported:  5/14/2024 1:51:29PM
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Nonhalogenated Organics by EPA 8015D - DRO/ORO

Analyst: KM

Analyte	Result mg/kg	Reporting Limit mg/kg	Spike Level mg/kg	Source Result mg/kg	Rec %	Rec Limits %	RPD %	RPD Limit %	Notes
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<b>Blank (2419180-BLK1)</b>					Prepared: 05/10/24 Analyzed: 05/13/24				
Diesel Range Organics (C10-C28)	ND	25.0							
Oil Range Organics (C28-C36)	ND	50.0							
Surrogate: n-Nonane	57.5		50.0		115	50-200			

<b>LCS (2419180-BS1)</b>					Prepared: 05/10/24 Analyzed: 05/13/24				
Diesel Range Organics (C10-C28)	327	25.0	250		131	38-132			
Surrogate: n-Nonane	58.1		50.0		116	50-200			

<b>LCS Dup (2419180-BSD1)</b>					Prepared: 05/10/24 Analyzed: 05/13/24				
Diesel Range Organics (C10-C28)	330	25.0	250		132	38-132	0.882	20	
Surrogate: n-Nonane	58.0		50.0		116	50-200			



QC Summary Data

Vertex Resource Services Inc. 3101 Boyd Drive Carlsbad NM, 88220	Project Name: Zeus SWD Line Project Number: 24015-0003 Project Manager: Chance Dixon	Reported:  5/14/2024 1:51:29PM
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Anions by EPA 300.0/9056A

Analyst: IY

Analyte	Result mg/kg	Reporting Limit mg/kg	Spike Level mg/kg	Source Result mg/kg	Rec %	Rec Limits %	RPD %	RPD Limit %	Notes
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Blank (2420020-BLK1)					Prepared: 05/13/24 Analyzed: 05/13/24				
Chloride	ND	20.0							
LCS (2420020-BS1)					Prepared: 05/13/24 Analyzed: 05/13/24				
Chloride	263	20.0	250		105	90-110			
LCS Dup (2420020-BSD1)					Prepared: 05/13/24 Analyzed: 05/13/24				
Chloride	263	20.0	250		105	90-110	0.108	20	

QC Summary Report Comment:  
Calculations are based off of the raw (non-rounded) data. However, for reporting purposes all QC data is rounded to three significant figures.  
Therefore, hand calculated values may differ slightly.





Definitions and Notes

Vertex Resource Services Inc.	Project Name:	Zeus SWD Line	
3101 Boyd Drive	Project Number:	24015-0003	Reported:
Carlsbad NM, 88220	Project Manager:	Chance Dixon	05/14/24 13:51

- ND Analyte NOT DETECTED at or above the reporting limit
  - NR Not Reported
  - RPD Relative Percent Difference
  - DNI Did Not Ignite
  - DNR Did not react with the addition of acid or base.
- Note (1): Methods marked with \*\* are non-accredited methods.
- Note (2): Soil data is reported on an "as received" weight basis, unless reported otherwise.





## Envirotech Analytical Laboratory

Printed: 5/8/2024 3:22:35PM

## Sample Receipt Checklist (SRC)

Instructions: Please take note of any NO checkmarks.

If we receive no response concerning these items within 24 hours of the date of this notice, all the samples will be analyzed as requested.

Client:	Vertex Resource Services Inc.	Date Received:	05/08/24 05:00	Work Order ID:	E405106
Phone:	(575) 748-0176	Date Logged In:	05/07/24 17:34	Logged In By:	Angelina Pineda
Email:	cdixon@vertex.ca	Due Date:	05/14/24 17:00 (4 day TAT)		

Chain of Custody (COC)

1. Does the sample ID match the COC? Yes
2. Does the number of samples per sampling site location match the COC? Yes
3. Were samples dropped off by client or carrier? Yes
4. Was the COC complete, i.e., signatures, dates/times, requested analyses? Yes
5. Were all samples received within holding time? Yes

Note: Analysis, such as pH which should be conducted in the field, i.e., 15 minute hold time, are not included in this discussion.

Carrier: CourierComments/Resolution

VOC by 8260 removed off Analysis per client request per text message. Green copy made with corrections

Sample Turn Around Time (TAT)

6. Did the COC indicate standard TAT, or Expedited TAT? Yes

Sample Cooler

7. Was a sample cooler received? Yes
8. If yes, was cooler received in good condition? Yes
9. Was the sample(s) received intact, i.e., not broken? Yes
10. Were custody/security seals present? No
11. If yes, were custody/security seals intact? NA
12. Was the sample received on ice? If yes, the recorded temp is 4°C, i.e., 6°±2°C Yes

Note: Thermal preservation is not required, if samples are received w/i 15 minutes of sampling

13. If no visible ice, record the temperature. Actual sample temperature: 4°C

Sample Container

14. Are aqueous VOC samples present? No
15. Are VOC samples collected in VOA Vials? NA
16. Is the head space less than 6-8 mm (pea sized or less)? NA
17. Was a trip blank (TB) included for VOC analyses? NA
18. Are non-VOC samples collected in the correct containers? Yes
19. Is the appropriate volume/weight or number of sample containers collected? Yes

Field Label

20. Were field sample labels filled out with the minimum information:
  - Sample ID? Yes
  - Date/Time Collected? Yes
  - Collectors name? Yes

Sample Preservation

21. Does the COC or field labels indicate the samples were preserved? No
22. Are sample(s) correctly preserved? NA
24. Is lab filtration required and/or requested for dissolved metals? No

Multiphase Sample Matrix

26. Does the sample have more than one phase, i.e., multiphase? No
27. If yes, does the COC specify which phase(s) is to be analyzed? NA

Subcontract Laboratory

28. Are samples required to get sent to a subcontract laboratory? No
29. Was a subcontract laboratory specified by the client and if so who? NA Subcontract Lab: NA

Client Instruction

Signature of client authorizing changes to the COC or sample disposition.

Date



envirotech Inc.



## Chain of Custody

Released to Imaging: 7/11/2024 2:56:53 PM



Report to:  
Chance Dixon



# envirotech

*Practical Solutions for a Better Tomorrow*

## Analytical Report

Vertex Resource Services Inc.

Project Name: Zeus SWD Line

Work Order: E405106

Job Number: 24015-0003

Received: 5/8/2024

Revision: 1

Report Reviewed By:

Walter Hinchman  
Laboratory Director  
5/14/24

5796 U.S. Hwy 64  
Farmington, NM 87401

Phone: (505) 632-1881  
Envirotech-inc.com



Envirotech Inc. certifies the test results meet all requirements of TNI unless noted otherwise.  
Statement of Data Authenticity: Envirotech Inc. attests the data reported has not been altered in any way.  
Partial or incomplete reproduction of this report is prohibited, unless approved by Envirotech Inc.  
Envirotech Inc. holds the Utah TNI certification NM00979 for data reported.  
Envirotech Inc. holds the Texas TNI certification T104704557 for data reported.

Date Reported: 5/14/24

Chance Dixon  
3101 Boyd Drive  
Carlsbad, NM 88220



Project Name: Zeus SWD Line  
Workorder: E405106  
Date Received: 5/8/2024 5:00:00AM

Chance Dixon,

Thank you for choosing Envirotech, Inc. as your analytical testing laboratory for the sample(s) received on, 5/8/2024 5:00:00AM, under the Project Name: Zeus SWD Line.

The analytical test results summarized in this report with the Project Name: Zeus SWD Line apply to the individual samples collected, identified and submitted bearing the project name on the enclosed chain-of-custody. Subcontracted sample analyses not conducted by Envirotech, Inc., are attached in full as issued by the subcontract laboratory.

Please review the Chain-of-Custody (COC) and Sample Receipt Checklist (SRC) for any issues regarding sample receipt temperature, containers, preservation etc. To best understand your test results, review the entire report summarizing your sample data and the associated quality control batch data.

All reported data in this analytical report were analyzed according to the referenced method(s) and are in compliance with the latest NELAC/TNI standards, unless otherwise noted. Samples or analytical quality control parameters not meeting specific QC criteria are qualified with a data flag. Data flag definitions are located in the Notes and Definitions section of this analytical report.

If you have any questions concerning this report, please feel free to contact Envirotech, Inc.

Respectfully,

**Walter Hinchman**  
Laboratory Director  
Office: 505-632-1881  
Cell: 775-287-1762  
[whinchman@envirotech-inc.com](mailto:whinchman@envirotech-inc.com)

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Envirotech Web Address: [www.envirotech-inc.com](http://www.envirotech-inc.com)



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Sample Summary

Vertex Resource Services Inc.	Project Name:	Zeus SWD Line	Reported:
3101 Boyd Drive	Project Number:	24015-0003	
Carlsbad NM, 88220	Project Manager:	Chance Dixon	05/14/24 13:51

Client Sample ID	Lab Sample ID	Matrix	Sampled	Received	Container
WES24 - 27 0-4FT	E405106-01A	Soil	05/06/24	05/08/24	Glass Jar, 4 oz.



Sample Data

Vertex Resource Services Inc. 3101 Boyd Drive Carlsbad NM, 88220	Project Name: Zeus SWD Line Project Number: 24015-0003 Project Manager: Chance Dixon	Reported: 5/14/2024 1:51:29PM
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WES24 - 27 0-4FT

E405106-01

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
<b>Volatile Organic Compounds by EPA 8260B</b>						
	mg/kg	mg/kg	Analyst: EG		Batch: 2419118	
Benzene	ND	0.0250	1	05/08/24	05/12/24	
Ethylbenzene	ND	0.0250	1	05/08/24	05/12/24	
Toluene	ND	0.0250	1	05/08/24	05/12/24	
o-Xylene	ND	0.0250	1	05/08/24	05/12/24	
p,m-Xylene	ND	0.0500	1	05/08/24	05/12/24	
Total Xylenes	ND	0.0250	1	05/08/24	05/12/24	
Surrogate: Bromofluorobenzene		109 %	70-130	05/08/24	05/12/24	
Surrogate: 1,2-Dichloroethane-d4		100 %	70-130	05/08/24	05/12/24	
Surrogate: Toluene-d8		104 %	70-130	05/08/24	05/12/24	
<b>Nonhalogenated Organics by EPA 8015D - GRO</b>						
	mg/kg	mg/kg	Analyst: EG		Batch: 2419118	
Gasoline Range Organics (C6-C10)	ND	20.0	1	05/08/24	05/12/24	
Surrogate: Bromofluorobenzene		109 %	70-130	05/08/24	05/12/24	
Surrogate: 1,2-Dichloroethane-d4		100 %	70-130	05/08/24	05/12/24	
Surrogate: Toluene-d8		104 %	70-130	05/08/24	05/12/24	
<b>Nonhalogenated Organics by EPA 8015D - DRO/ORO</b>						
	mg/kg	mg/kg	Analyst: KM		Batch: 2419180	
Diesel Range Organics (C10-C28)	ND	25.0	1	05/10/24	05/13/24	
Oil Range Organics (C28-C36)	ND	50.0	1	05/10/24	05/13/24	
Surrogate: n-Nonane		111 %	50-200	05/10/24	05/13/24	
<b>Anions by EPA 300.0/9056A</b>						
	mg/kg	mg/kg	Analyst: IY		Batch: 2420020	
Chloride	552	20.0	1	05/13/24	05/14/24	



QC Summary Data

Vertex Resource Services Inc. 3101 Boyd Drive Carlsbad NM, 88220	Project Name: Zeus SWD Line Project Number: 24015-0003 Project Manager: Chance Dixon	Reported:  5/14/2024 1:51:29PM
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Volatile Organic Compounds by EPA 8260B

Analyst: EG

Analyte	Result mg/kg	Reporting Limit mg/kg	Spike Level mg/kg	Source Result mg/kg	Rec %	Rec Limits %	RPD %	RPD Limit %	Notes
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Blank (2419118-BLK1) Prepared: 05/08/24 Analyzed: 05/12/24

Benzene	ND	0.0250							
Ethylbenzene	ND	0.0250							
Toluene	ND	0.0250							
o-Xylene	ND	0.0250							
p,m-Xylene	ND	0.0500							
Total Xylenes	ND	0.0250							
Surrogate: Bromofluorobenzene	0.532		0.500		106	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.495		0.500		98.9	70-130			
Surrogate: Toluene-d8	0.521		0.500		104	70-130			

LCS (2419118-BS1) Prepared: 05/08/24 Analyzed: 05/12/24

Benzene	2.37	0.0250	2.50		94.8	70-130			
Ethylbenzene	2.65	0.0250	2.50		106	70-130			
Toluene	2.49	0.0250	2.50		99.5	70-130			
o-Xylene	2.67	0.0250	2.50		107	70-130			
p,m-Xylene	5.38	0.0500	5.00		108	70-130			
Total Xylenes	8.05	0.0250	7.50		107	70-130			
Surrogate: Bromofluorobenzene	0.540		0.500		108	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.494		0.500		98.8	70-130			
Surrogate: Toluene-d8	0.527		0.500		105	70-130			

Matrix Spike (2419118-MS1) Source: E405104-03 Prepared: 05/08/24 Analyzed: 05/12/24

Benzene	2.40	0.0250	2.50	ND	96.1	48-131			
Ethylbenzene	2.67	0.0250	2.50	ND	107	45-135			
Toluene	2.52	0.0250	2.50	ND	101	48-130			
o-Xylene	2.77	0.0250	2.50	ND	111	43-135			
p,m-Xylene	5.55	0.0500	5.00	ND	111	43-135			
Total Xylenes	8.32	0.0250	7.50	ND	111	43-135			
Surrogate: Bromofluorobenzene	0.534		0.500		107	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.484		0.500		96.7	70-130			
Surrogate: Toluene-d8	0.525		0.500		105	70-130			

Matrix Spike Dup (2419118-MSD1) Source: E405104-03 Prepared: 05/08/24 Analyzed: 05/12/24

Benzene	2.43	0.0250	2.50	ND	97.0	48-131	0.994	23	
Ethylbenzene	2.67	0.0250	2.50	ND	107	45-135	0.112	27	
Toluene	2.51	0.0250	2.50	ND	101	48-130	0.298	24	
o-Xylene	2.84	0.0250	2.50	ND	114	43-135	2.41	27	
p,m-Xylene	5.67	0.0500	5.00	ND	113	43-135	2.09	27	
Total Xylenes	8.51	0.0250	7.50	ND	113	43-135	2.19	27	
Surrogate: Bromofluorobenzene	0.531		0.500		106	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.488		0.500		97.6	70-130			
Surrogate: Toluene-d8	0.516		0.500		103	70-130			



QC Summary Data

Vertex Resource Services Inc. 3101 Boyd Drive Carlsbad NM, 88220	Project Name: Zeus SWD Line Project Number: 24015-0003 Project Manager: Chance Dixon	Reported:  5/14/2024 1:51:29PM
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Nonhalogenated Organics by EPA 8015D - GRO

Analyst: EG

Analyte	Result mg/kg	Reporting Limit mg/kg	Spike Level mg/kg	Source Result mg/kg	Rec % %	Rec Limits %	RPD %	RPD Limit %	Notes
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Blank (2419118-BLK1) Prepared: 05/08/24 Analyzed: 05/12/24

Gasoline Range Organics (C6-C10)	ND	20.0							
Surrogate: Bromofluorobenzene	0.532		0.500		106	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.495		0.500		98.9	70-130			
Surrogate: Toluene-d8	0.521		0.500		104	70-130			

LCS (2419118-BS2) Prepared: 05/08/24 Analyzed: 05/12/24

Gasoline Range Organics (C6-C10)	45.4	20.0	50.0		90.9	70-130			
Surrogate: Bromofluorobenzene	0.544		0.500		109	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.490		0.500		97.9	70-130			
Surrogate: Toluene-d8	0.523		0.500		105	70-130			

Matrix Spike (2419118-MS2) Source: E405104-03 Prepared: 05/08/24 Analyzed: 05/12/24

Gasoline Range Organics (C6-C10)	49.5	20.0	50.0	ND	98.9	70-130			
Surrogate: Bromofluorobenzene	0.534		0.500		107	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.484		0.500		96.7	70-130			
Surrogate: Toluene-d8	0.513		0.500		103	70-130			

Matrix Spike Dup (2419118-MSD2) Source: E405104-03 Prepared: 05/08/24 Analyzed: 05/12/24

Gasoline Range Organics (C6-C10)	49.0	20.0	50.0	ND	98.1	70-130	0.868	20	
Surrogate: Bromofluorobenzene	0.530		0.500		106	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.484		0.500		96.8	70-130			
Surrogate: Toluene-d8	0.527		0.500		105	70-130			



QC Summary Data

Vertex Resource Services Inc. 3101 Boyd Drive Carlsbad NM, 88220	Project Name: Zeus SWD Line Project Number: 24015-0003 Project Manager: Chance Dixon	Reported:  5/14/2024 1:51:29PM
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Nonhalogenated Organics by EPA 8015D - DRO/ORO

Analyst: KM

Analyte	Result mg/kg	Reporting Limit mg/kg	Spike Level mg/kg	Source Result mg/kg	Rec %	Rec Limits %	RPD %	RPD Limit %	Notes
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Blank (2419180-BLK1) Prepared: 05/10/24 Analyzed: 05/13/24

Diesel Range Organics (C10-C28)	ND	25.0							
Oil Range Organics (C28-C36)	ND	50.0							
Surrogate: n-Nonane	57.5		50.0		115	50-200			

LCS (2419180-BS1) Prepared: 05/10/24 Analyzed: 05/13/24

Diesel Range Organics (C10-C28)	327	25.0	250		131	38-132			
Surrogate: n-Nonane	58.1		50.0		116	50-200			

LCS Dup (2419180-BSD1) Prepared: 05/10/24 Analyzed: 05/13/24

Diesel Range Organics (C10-C28)	330	25.0	250		132	38-132	0.882	20	
Surrogate: n-Nonane	58.0		50.0		116	50-200			





QC Summary Data

Vertex Resource Services Inc. 3101 Boyd Drive Carlsbad NM, 88220	Project Name: Zeus SWD Line Project Number: 24015-0003 Project Manager: Chance Dixon	Reported:  5/14/2024 1:51:29PM
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Anions by EPA 300.0/9056A

Analyst: IY

Analyte	Result mg/kg	Reporting Limit mg/kg	Spike Level mg/kg	Source Result mg/kg	Rec %	Rec Limits %	RPD %	RPD Limit %	Notes
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Blank (2420020-BLK1)					Prepared: 05/13/24 Analyzed: 05/13/24				
Chloride	ND	20.0							
LCS (2420020-BS1)					Prepared: 05/13/24 Analyzed: 05/13/24				
Chloride	263	20.0	250		105	90-110			
LCS Dup (2420020-BSD1)					Prepared: 05/13/24 Analyzed: 05/13/24				
Chloride	263	20.0	250		105	90-110	0.108	20	

QC Summary Report Comment:  
Calculations are based off of the raw (non-rounded) data. However, for reporting purposes all QC data is rounded to three significant figures.  
Therefore, hand calculated values may differ slightly.



Definitions and Notes

Vertex Resource Services Inc.	Project Name:	Zeus SWD Line	
3101 Boyd Drive	Project Number:	24015-0003	Reported:
Carlsbad NM, 88220	Project Manager:	Chance Dixon	05/14/24 13:51

- ND Analyte NOT DETECTED at or above the reporting limit
  - NR Not Reported
  - RPD Relative Percent Difference
  - DNI Did Not Ignite
  - DNR Did not react with the addition of acid or base.
- Note (1): Methods marked with \*\* are non-accredited methods.
- Note (2): Soil data is reported on an "as received" weight basis, unless reported otherwise.

# Chain of Custody

Client Information					Invoice Information			Lab Use Only				TAT				State			
Client: Vertex (TAPROCK)					Company: TAPROCK			Lab WO#		Job Number		1D	2D	3D	Std	NM	CO	UT	TX
Project Name:					Address: on file			E 905106		2405-0003					✓	✓			
Project Manager: Chance Dixon					City, State, Zip:														
Address: on file					Phone:														
City, State, Zip: ↓					Email:														
Phone: 575 988 1472					Miscellaneous:														
Email: CDixon@Vertex.ca																			

Sample Information						Analysis and Method										EPA Program		
Time Sampled	Date Sampled	Matrix	No. of Containers	Sample ID	Field Filter	Lab Number	DRO/ORO by 8015	GRO/DRO by 8015	BTEX by 8021	VOC by 8260	Chloride 300.0	BGDOC - NM	TCEQ 1005 - TX	RCRA 8 Metals	SDWA	CWA	RCRA	
13:00	05/06/24	Soil	1,40±	WES 24-27 0-4 FT		1	✓	✓	✓	✓	✓							

Additional Instructions: CCI: WWR010154 @Vertex

I, (field sampler), attest to the validity and authenticity of this sample. I am aware that tampering with or intentionally mislabeling the sample location, date or time of collection is considered fraud and may be grounds for legal action.

Sampled by: Wyatt Wadleigh

Relinquished by: (Signature) wyatt w	Date 5-7-24	Time 0945	Received by: (Signature) Michelle Gonzales	Date 5-7-24	Time 0945	Samples requiring thermal preservation must be received on ice the day they are sampled or received packed in ice at an avg temp above 0 but less than 6C on subsequent day.  Lab Use Only Received on ice: <input checked="" type="radio"/> Y / N  T1 _____ T2 _____ T3 _____  AVG Temp °C 4
Relinquished by: (Signature) Michelle Gonzales	Date 5-7-24	Time 1805	Received by: (Signature) D. H.	Date 5-7-24	Time 1805	
Relinquished by: (Signature) D. H.	Date 5-7-24	Time 2400	Received by: (Signature) Kyrin R. Helle	Date 5-8-24	Time 0500	
Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time	

Sample Matrix: S - Soil, Sd - Solid, Sg - Sludge, A - Aqueous, O - Other S

Container Type: g - glass, p - poly/plastic, ag - amber glass, v - VOA g

Note: Samples are discarded 14 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at the client expense. The report for the analysis of the above samples is applicable only to those samples received by the laboratory with this COC. The liability of the laboratory is limited to the amount paid for on the report.

## Envirotech Analytical Laboratory

Printed: 5/8/2024 3:22:35PM

## Sample Receipt Checklist (SRC)

Instructions: Please take note of any NO checkmarks.

If we receive no response concerning these items within 24 hours of the date of this notice, all the samples will be analyzed as requested.

Client:	Vertex Resource Services Inc.	Date Received:	05/08/24 05:00	Work Order ID:	E405106
Phone:	(575) 748-0176	Date Logged In:	05/07/24 17:34	Logged In By:	Angelina Pineda
Email:	cdixon@vertex.ca	Due Date:	05/14/24 17:00 (4 day TAT)		

Chain of Custody (COC)

1. Does the sample ID match the COC? Yes
2. Does the number of samples per sampling site location match the COC? Yes
3. Were samples dropped off by client or carrier? Yes
4. Was the COC complete, i.e., signatures, dates/times, requested analyses? Yes
5. Were all samples received within holding time? Yes

Carrier: Courier

Note: Analysis, such as pH which should be conducted in the field, i.e., 15 minute hold time, are not included in this discussion.

Comments/Resolution

VOC by 8260 removed off Analysis per client request per text message. Green copy made with corrections

Sample Turn Around Time (TAT)

6. Did the COC indicate standard TAT, or Expedited TAT? Yes

Sample Cooler

7. Was a sample cooler received? Yes
8. If yes, was cooler received in good condition? Yes
9. Was the sample(s) received intact, i.e., not broken? Yes
10. Were custody/security seals present? No
11. If yes, were custody/security seals intact? NA
12. Was the sample received on ice? If yes, the recorded temp is 4°C, i.e., 6°±2°C Yes

Note: Thermal preservation is not required, if samples are received w/i 15 minutes of sampling

13. If no visible ice, record the temperature. Actual sample temperature: 4°C

Sample Container

14. Are aqueous VOC samples present? No
15. Are VOC samples collected in VOA Vials? NA
16. Is the head space less than 6-8 mm (pea sized or less)? NA
17. Was a trip blank (TB) included for VOC analyses? NA
18. Are non-VOC samples collected in the correct containers? Yes
19. Is the appropriate volume/weight or number of sample containers collected? Yes

Field Label

20. Were field sample labels filled out with the minimum information:
  - Sample ID? Yes
  - Date/Time Collected? Yes
  - Collectors name? Yes

Sample Preservation

21. Does the COC or field labels indicate the samples were preserved? No
22. Are sample(s) correctly preserved? NA
24. Is lab filtration required and/or requested for dissolved metals? No

Multiphase Sample Matrix

26. Does the sample have more than one phase, i.e., multiphase? No
27. If yes, does the COC specify which phase(s) is to be analyzed? NA

Subcontract Laboratory

28. Are samples required to get sent to a subcontract laboratory? No
29. Was a subcontract laboratory specified by the client and if so who? NA Subcontract Lab: NA

Client Instruction

Signature of client authorizing changes to the COC or sample disposition.

Date



envirotech Inc.



envirotech



Report to:  
Chance Dixon



# envirotech

*Practical Solutions for a Better Tomorrow*

## Analytical Report

Vertex Resource Services Inc.

Project Name: Zeus SWD Line

Work Order: E405122

Job Number: 24015-0001

Received: 5/9/2024

Revision: 1

Report Reviewed By:

Walter Hinchman  
Laboratory Director  
5/10/24

5796 U.S. Hwy 64  
Farmington, NM 87401

Phone: (505) 632-1881  
Envirotech-inc.com



Envirotech Inc. certifies the test results meet all requirements of TNI unless noted otherwise.  
Statement of Data Authenticity: Envirotech Inc. attests the data reported has not been altered in any way.  
Partial or incomplete reproduction of this report is prohibited, unless approved by Envirotech Inc.  
Envirotech Inc. holds the Utah TNI certification NM00979 for data reported.  
Envirotech Inc. holds the Texas TNI certification T104704557 for data reported.

Date Reported: 5/10/24

Chance Dixon  
3101 Boyd Drive  
Carlsbad, NM 88220



Project Name: Zeus SWD Line  
Workorder: E405122  
Date Received: 5/9/2024 5:00:00AM

Chance Dixon,

Thank you for choosing Envirotech, Inc. as your analytical testing laboratory for the sample(s) received on, 5/9/2024 5:00:00AM, under the Project Name: Zeus SWD Line.

The analytical test results summarized in this report with the Project Name: Zeus SWD Line apply to the individual samples collected, identified and submitted bearing the project name on the enclosed chain-of-custody. Subcontracted sample analyses not conducted by Envirotech, Inc., are attached in full as issued by the subcontract laboratory.

Please review the Chain-of-Custody (COC) and Sample Receipt Checklist (SRC) for any issues regarding sample receipt temperature, containers, preservation etc. To best understand your test results, review the entire report summarizing your sample data and the associated quality control batch data.

All reported data in this analytical report were analyzed according to the referenced method(s) and are in compliance with the latest NELAC/TNI standards, unless otherwise noted. Samples or analytical quality control parameters not meeting specific QC criteria are qualified with a data flag. Data flag definitions are located in the Notes and Definitions section of this analytical report.

If you have any questions concerning this report, please feel free to contact Envirotech, Inc.

Respectfully,

**Walter Hinchman**  
Laboratory Director  
Office: 505-632-1881  
Cell: 775-287-1762  
[whinchman@envirotech-inc.com](mailto:whinchman@envirotech-inc.com)

**Raina Schwanz**  
Laboratory Administrator  
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[rainaschwanz@envirotech-inc.com](mailto:rainaschwanz@envirotech-inc.com)

**Alexa Michaels**  
Sample Custody Officer  
Office: 505-632-1881  
[labadmin@envirotech-inc.com](mailto:labadmin@envirotech-inc.com)

Field Offices:

**Southern New Mexico Area**

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Office: 505-421-LABS(5227)  
Cell: 505-947-8222  
[mgonzales@envirotech-inc.com](mailto:mgonzales@envirotech-inc.com)

Envirotech Web Address: [www.envirotech-inc.com](http://www.envirotech-inc.com)

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Sample Summary

Vertex Resource Services Inc. 3101 Boyd Drive Carlsbad NM, 88220	Project Name: Zeus SWD Line Project Number: 24015-0001 Project Manager: Chance Dixon	Reported: 05/10/24 14:22
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Client Sample ID	Lab Sample ID	Matrix	Sampled	Received	Container
WES24-31	E405122-01A	Soil	05/07/24	05/09/24	Glass Jar, 2 oz.
WES24-32	E405122-02A	Soil	05/07/24	05/09/24	Glass Jar, 2 oz.
BES24-01	E405122-03A	Soil	05/07/24	05/09/24	Glass Jar, 2 oz.
WES24-36	E405122-04A	Soil	05/07/24	05/09/24	Glass Jar, 2 oz.



Sample Data

Vertex Resource Services Inc. 3101 Boyd Drive Carlsbad NM, 88220	Project Name: Zeus SWD Line Project Number: 24015-0001 Project Manager: Chance Dixon	Reported: 5/10/2024 2:22:14PM
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WES24-31  
E405122-01

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
<b>Volatile Organics by EPA 8021B</b>	mg/kg	mg/kg	Analyst: RKS		Batch: 2419144	
Benzene	ND	0.0250	1	05/09/24	05/09/24	
Ethylbenzene	ND	0.0250	1	05/09/24	05/09/24	
Toluene	ND	0.0250	1	05/09/24	05/09/24	
o-Xylene	ND	0.0250	1	05/09/24	05/09/24	
p,m-Xylene	ND	0.0500	1	05/09/24	05/09/24	
Total Xylenes	ND	0.0250	1	05/09/24	05/09/24	
Surrogate: 4-Bromochlorobenzene-PID	93.0 %	70-130		05/09/24	05/09/24	
<b>Nonhalogenated Organics by EPA 8015D - GRO</b>	mg/kg	mg/kg	Analyst: RKS		Batch: 2419144	
Gasoline Range Organics (C6-C10)	ND	20.0	1	05/09/24	05/09/24	
Surrogate: 1-Chloro-4-fluorobenzene-FID	89.2 %	70-130		05/09/24	05/09/24	
<b>Nonhalogenated Organics by EPA 8015D - DRO/ORO</b>	mg/kg	mg/kg	Analyst: KM		Batch: 2419145	
Diesel Range Organics (C10-C28)	ND	25.0	1	05/09/24	05/09/24	
Oil Range Organics (C28-C36)	ND	50.0	1	05/09/24	05/09/24	
Surrogate: n-Nonane	111 %	50-200		05/09/24	05/09/24	
<b>Anions by EPA 300.0/9056A</b>	mg/kg	mg/kg	Analyst: IY		Batch: 2419143	
Chloride	1210	40.0	2	05/09/24	05/09/24	





## Sample Data

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

Project Name: Zeus SWD Line  
Project Number: 24015-0001  
Project Manager: Chance Dixon

**Reported:**  
5/10/2024 2:22:14PM

WES24-32

E405122-02

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
<b>Volatile Organics by EPA 8021B</b>						
	mg/kg	mg/kg		Analyst: RKS		Batch: 2419144
Benzene	ND	0.0250	1	05/09/24	05/09/24	
Ethylbenzene	ND	0.0250	1	05/09/24	05/09/24	
Toluene	ND	0.0250	1	05/09/24	05/09/24	
o-Xylene	ND	0.0250	1	05/09/24	05/09/24	
p,m-Xylene	ND	0.0500	1	05/09/24	05/09/24	
Total Xylenes	ND	0.0250	1	05/09/24	05/09/24	
<i>Surrogate: 4-Bromochlorobenzene-PID</i>						
	92.0 %	70-130		05/09/24	05/09/24	
<b>Nonhalogenated Organics by EPA 8015D - GRO</b>						
	mg/kg	mg/kg		Analyst: RKS		Batch: 2419144
Gasoline Range Organics (C6-C10)	ND	20.0	1	05/09/24	05/09/24	
<i>Surrogate: 1-Chloro-4-fluorobenzene-FID</i>						
	89.3 %	70-130		05/09/24	05/09/24	
<b>Nonhalogenated Organics by EPA 8015D - DRO/ORO</b>						
	mg/kg	mg/kg		Analyst: KM		Batch: 2419145
Diesel Range Organics (C10-C28)	ND	25.0	1	05/09/24	05/09/24	
Oil Range Organics (C28-C36)	ND	50.0	1	05/09/24	05/09/24	
<i>Surrogate: n-Nonane</i>						
	110 %	50-200		05/09/24	05/09/24	
<b>Anions by EPA 300.0/9056A</b>						
	mg/kg	mg/kg		Analyst: IY		Batch: 2419143
Chloride	511	20.0	1	05/09/24	05/09/24	



Sample Data

Vertex Resource Services Inc. 3101 Boyd Drive Carlsbad NM, 88220	Project Name: Zeus SWD Line Project Number: 24015-0001 Project Manager: Chance Dixon	Reported: 5/10/2024 2:22:14PM
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BES24-01

E405122-03

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
<b>Volatile Organics by EPA 8021B</b>	mg/kg	mg/kg	Analyst: RKS		Batch: 2419144	
Benzene	ND	0.0250	1	05/09/24	05/09/24	
Ethylbenzene	ND	0.0250	1	05/09/24	05/09/24	
Toluene	ND	0.0250	1	05/09/24	05/09/24	
o-Xylene	ND	0.0250	1	05/09/24	05/09/24	
p,m-Xylene	ND	0.0500	1	05/09/24	05/09/24	
Total Xylenes	ND	0.0250	1	05/09/24	05/09/24	
Surrogate: 4-Bromochlorobenzene-PID	93.4 %	70-130		05/09/24	05/09/24	
<b>Nonhalogenated Organics by EPA 8015D - GRO</b>	mg/kg	mg/kg	Analyst: RKS		Batch: 2419144	
Gasoline Range Organics (C6-C10)	ND	20.0	1	05/09/24	05/09/24	
Surrogate: 1-Chloro-4-fluorobenzene-FID	88.8 %	70-130		05/09/24	05/09/24	
<b>Nonhalogenated Organics by EPA 8015D - DRO/ORO</b>	mg/kg	mg/kg	Analyst: KM		Batch: 2419145	
Diesel Range Organics (C10-C28)	ND	25.0	1	05/09/24	05/09/24	
Oil Range Organics (C28-C36)	ND	50.0	1	05/09/24	05/09/24	
Surrogate: n-Nonane	93.4 %	50-200		05/09/24	05/09/24	
<b>Anions by EPA 300.0/9056A</b>	mg/kg	mg/kg	Analyst: IY		Batch: 2419143	
Chloride	4350	40.0	2	05/09/24	05/09/24	



Sample Data

Vertex Resource Services Inc. 3101 Boyd Drive Carlsbad NM, 88220	Project Name: Zeus SWD Line Project Number: 24015-0001 Project Manager: Chance Dixon	Reported: 5/10/2024 2:22:14PM
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WES24-36  
E405122-04

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
<b>Volatile Organics by EPA 8021B</b>	mg/kg	mg/kg	Analyst: RKS		Batch: 2419144	
Benzene	ND	0.0250	1	05/09/24	05/09/24	
Ethylbenzene	ND	0.0250	1	05/09/24	05/09/24	
Toluene	ND	0.0250	1	05/09/24	05/09/24	
o-Xylene	ND	0.0250	1	05/09/24	05/09/24	
p,m-Xylene	ND	0.0500	1	05/09/24	05/09/24	
Total Xylenes	ND	0.0250	1	05/09/24	05/09/24	
Surrogate: 4-Bromochlorobenzene-PID	93.9 %	70-130		05/09/24	05/09/24	
<b>Nonhalogenated Organics by EPA 8015D - GRO</b>	mg/kg	mg/kg	Analyst: RKS		Batch: 2419144	
Gasoline Range Organics (C6-C10)	ND	20.0	1	05/09/24	05/09/24	
Surrogate: 1-Chloro-4-fluorobenzene-FID	89.5 %	70-130		05/09/24	05/09/24	
<b>Nonhalogenated Organics by EPA 8015D - DRO/ORO</b>	mg/kg	mg/kg	Analyst: KM		Batch: 2419145	
Diesel Range Organics (C10-C28)	ND	25.0	1	05/09/24	05/10/24	
Oil Range Organics (C28-C36)	ND	50.0	1	05/09/24	05/10/24	
Surrogate: n-Nonane	101 %	50-200		05/09/24	05/10/24	
<b>Anions by EPA 300.0/9056A</b>	mg/kg	mg/kg	Analyst: IY		Batch: 2419143	
Chloride	1140	20.0	1	05/09/24	05/09/24	



QC Summary Data

Vertex Resource Services Inc. 3101 Boyd Drive Carlsbad NM, 88220	Project Name: Zeus SWD Line Project Number: 24015-0001 Project Manager: Chance Dixon	Reported:  5/10/2024 2:22:14PM
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Volatile Organics by EPA 8021B

Analyst: RKS

Analyte	Result mg/kg	Reporting Limit mg/kg	Spike Level mg/kg	Source Result mg/kg	Rec %	Rec Limits %	RPD %	RPD Limit %	Notes
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Blank (2419144-BLK1) Prepared: 05/09/24 Analyzed: 05/09/24

Benzene	ND	0.0250							
Ethylbenzene	ND	0.0250							
Toluene	ND	0.0250							
o-Xylene	ND	0.0250							
p,m-Xylene	ND	0.0500							
Total Xylenes	ND	0.0250							
Surrogate: 4-Bromochlorobenzene-PID	7.21		8.00		90.1	70-130			

LCS (2419144-BS1) Prepared: 05/09/24 Analyzed: 05/09/24

Benzene	4.96	0.0250	5.00		99.2	70-130			
Ethylbenzene	4.82	0.0250	5.00		96.3	70-130			
Toluene	4.90	0.0250	5.00		98.0	70-130			
o-Xylene	4.79	0.0250	5.00		95.8	70-130			
p,m-Xylene	9.78	0.0500	10.0		97.8	70-130			
Total Xylenes	14.6	0.0250	15.0		97.1	70-130			
Surrogate: 4-Bromochlorobenzene-PID	7.21		8.00		90.1	70-130			

Matrix Spike (2419144-MS1) Source: E405121-02 Prepared: 05/09/24 Analyzed: 05/09/24

Benzene	5.00	0.0250	5.00	ND	100	54-133			
Ethylbenzene	4.86	0.0250	5.00	ND	97.1	61-133			
Toluene	4.94	0.0250	5.00	ND	98.8	61-130			
o-Xylene	4.84	0.0250	5.00	ND	96.8	63-131			
p,m-Xylene	9.86	0.0500	10.0	ND	98.6	63-131			
Total Xylenes	14.7	0.0250	15.0	ND	98.0	63-131			
Surrogate: 4-Bromochlorobenzene-PID	7.29		8.00		91.1	70-130			

Matrix Spike Dup (2419144-MSD1) Source: E405121-02 Prepared: 05/09/24 Analyzed: 05/09/24

Benzene	4.90	0.0250	5.00	ND	98.0	54-133	2.04	20	
Ethylbenzene	4.80	0.0250	5.00	ND	96.1	61-133	1.12	20	
Toluene	4.95	0.0250	5.00	ND	99.0	61-130	0.234	20	
o-Xylene	4.81	0.0250	5.00	ND	96.2	63-131	0.601	20	
p,m-Xylene	9.75	0.0500	10.0	ND	97.5	63-131	1.03	20	
Total Xylenes	14.6	0.0250	15.0	ND	97.1	63-131	0.891	20	
Surrogate: 4-Bromochlorobenzene-PID	7.33		8.00		91.6	70-130			



QC Summary Data

Vertex Resource Services Inc. 3101 Boyd Drive Carlsbad NM, 88220	Project Name: Zeus SWD Line Project Number: 24015-0001 Project Manager: Chance Dixon	Reported:  5/10/2024 2:22:14PM
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Nonhalogenated Organics by EPA 8015D - GRO

Analyst: RKS

Analyte	Result mg/kg	Reporting Limit mg/kg	Spike Level mg/kg	Source Result mg/kg	Rec %	Rec Limits %	RPD %	RPD Limit %	Notes
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Blank (2419144-BLK1) Prepared: 05/09/24 Analyzed: 05/09/24

Gasoline Range Organics (C6-C10)	ND	20.0							
Surrogate: 1-Chloro-4-fluorobenzene-FID	7.12		8.00		89.0	70-130			

LCS (2419144-BS2) Prepared: 05/09/24 Analyzed: 05/09/24

Gasoline Range Organics (C6-C10)	45.2	20.0	50.0		90.3	70-130			
Surrogate: 1-Chloro-4-fluorobenzene-FID	7.23		8.00		90.3	70-130			

Matrix Spike (2419144-MS2) Source: E405121-02 Prepared: 05/09/24 Analyzed: 05/09/24

Gasoline Range Organics (C6-C10)	45.9	20.0	50.0	ND	91.7	70-130			
Surrogate: 1-Chloro-4-fluorobenzene-FID	7.67		8.00		95.8	70-130			

Matrix Spike Dup (2419144-MSD2) Source: E405121-02 Prepared: 05/09/24 Analyzed: 05/09/24

Gasoline Range Organics (C6-C10)	44.6	20.0	50.0	ND	89.2	70-130	2.76	20	
Surrogate: 1-Chloro-4-fluorobenzene-FID	7.15		8.00		89.4	70-130			





QC Summary Data

Vertex Resource Services Inc. 3101 Boyd Drive Carlsbad NM, 88220	Project Name: Zeus SWD Line Project Number: 24015-0001 Project Manager: Chance Dixon	Reported:  5/10/2024 2:22:14PM
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Nonhalogenated Organics by EPA 8015D - DRO/ORO

Analyst: KM

Analyte	Result mg/kg	Reporting Limit mg/kg	Spike Level mg/kg	Source Result mg/kg	Rec %	Rec Limits %	RPD %	RPD Limit %	Notes
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Blank (2419145-BLK1) Prepared: 05/09/24 Analyzed: 05/09/24

Diesel Range Organics (C10-C28)	ND	25.0							
Oil Range Organics (C28-C36)	ND	50.0							
Surrogate: n-Nonane	54.3		50.0		109	50-200			

LCS (2419145-BS1) Prepared: 05/09/24 Analyzed: 05/09/24

Diesel Range Organics (C10-C28)	284	25.0	250		114	38-132			
Surrogate: n-Nonane	53.4		50.0		107	50-200			

LCS Dup (2419145-BSD1) Prepared: 05/09/24 Analyzed: 05/09/24

Diesel Range Organics (C10-C28)	294	25.0	250		118	38-132	3.61	20	
Surrogate: n-Nonane	52.9		50.0		106	50-200			



QC Summary Data

Vertex Resource Services Inc. 3101 Boyd Drive Carlsbad NM, 88220	Project Name: Zeus SWD Line Project Number: 24015-0001 Project Manager: Chance Dixon	Reported:  5/10/2024 2:22:14PM
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Anions by EPA 300.0/9056A

Analyst: IY

Analyte	Result mg/kg	Reporting Limit mg/kg	Spike Level mg/kg	Source Result mg/kg	Rec %	Rec Limits %	RPD %	RPD Limit %	Notes
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Blank (2419143-BLK1)					Prepared: 05/08/24 Analyzed: 05/08/24				
Chloride	ND	20.0							
LCS (2419143-BS1)					Prepared: 05/08/24 Analyzed: 05/08/24				
Chloride	254	20.0	250		102	90-110			
LCS Dup (2419143-BSD1)					Prepared: 05/08/24 Analyzed: 05/08/24				
Chloride	254	20.0	250		101	90-110	0.0607	20	

QC Summary Report Comment:  
Calculations are based off of the raw (non-rounded) data. However, for reporting purposes all QC data is rounded to three significant figures.  
Therefore, hand calculated values may differ slightly.



Definitions and Notes

Vertex Resource Services Inc.	Project Name:	Zeus SWD Line	
3101 Boyd Drive	Project Number:	24015-0001	Reported:
Carlsbad NM, 88220	Project Manager:	Chance Dixon	05/10/24 14:22

- ND      Analyte NOT DETECTED at or above the reporting limit
- NR      Not Reported
- RPD      Relative Percent Difference
- DNI      Did Not Ignite
- DNR      Did not react with the addition of acid or base.
- Note (1): Methods marked with \*\* are non-accredited methods.
- Note (2): Soil data is reported on an "as received" weight basis, unless reported otherwise.

## Chain of Custody

Page 1 of 1

Client Information				Invoice Information		Lab Use Only		TAT				State					
Client: <u>Vertex (Taprock)</u>				Company: <u>Taprock</u>		Lab WO# <u>E405122</u>		Job Number <u>24015-0001</u>		1D	2D	3D	Std	NM	CO	UT	TX
Project Name: <u>Levee SWD Line</u>				Address: <u>Ontario</u>													
Project Manager: <u>Chase Dixon</u>				City, State, Zip: <u>↓</u>													
Address: <u>Ontario</u>				Phone: <u>↓</u>													
City, State, Zip: <u>↓</u>				Email: <u>↓</u>													
Phone: <u>575 988 1472</u>				Miscellaneous:													
Email: <u>CDixon@Vertex.ca</u>																	

Sample Information						Analysis and Method										EPA Program		
Time Sampled	Date Sampled	Matrix	No. of Containers	Sample ID	Field Filter	Lab Number	DRO/DRO by 8015	GRO/DRO by 8015	BTEX by 8021	VOC by 8200	Chloride 300.0	BGDOC - NM	TCEQ 1005 - TX	RCRA 8 Metals	SDWA	CWA	RCRA	
12:05	05/07/24	Soil	402361	WES24-31		1	✓	✓	✓	✓	✓							
12:05	05/07/24	↓	↓	WES24-32		2	↓	↓	↓	↓	↓							
14:00	05/07/24	↓	↓	BES24-01		3	↓	↓	↓	↓	↓							
13:00	05/07/24	↓	↓	WES24-36		4	↓	↓	↓	↓	↓							

Additional Instructions: Please CC Wwadeleish@Vertex.ca

I, (field sampler), attest to the validity and authenticity of this sample. I am aware that tampering with or intentionally mislabeling the sample location, date or time of collection is considered fraud and may be grounds for legal action.

Sampled by: Wadeleish

Relinquished by: (Signature) <u>Wadeleish</u>	Date <u>05/08/24</u>	Time <u>1045</u>	Received by: (Signature) <u>Michelle Gonzales</u>	Date <u>5-8-24</u>	Time <u>1045</u>	Samples requiring thermal preservation must be received on ice the day they are sampled or received packed in ice at an avg temp above 0 but less than 6C on subsequent day.  Received on ice: <u>Y</u> / N  T1 _____ T2 _____ T3 _____  AVG Temp °C <u>4</u>
Relinquished by: (Signature) <u>Michelle Gonzales</u>	Date <u>5-8-24</u>	Time <u>1800</u>	Received by: (Signature) <u>Andrew M880</u>	Date <u>5-8-24</u>	Time <u>1800</u>	
Relinquished by: (Signature) <u>Andrew M880</u>	Date <u>5-8-24</u>	Time <u>2345</u>	Received by: (Signature) <u>Michelle R Hall</u>	Date <u>5-9-24</u>	Time <u>0500</u>	
Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time	

Sample Matrix: S - Soil, Sd - Solid, Sg - Sludge, A - Aqueous, O - Other \_\_\_\_\_

Container Type: g - glass, p - poly/plastic, ag - amber glass, v - VOA \_\_\_\_\_

Note: Samples are discarded 14 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at the client expense. The report for the analysis of the above samples is applicable only to those samples received by the laboratory with this COC. The liability of the laboratory is limited to the amount paid for on the report.



envirotech

## Envirotech Analytical Laboratory

Printed: 5/9/2024 10:19:41AM

## Sample Receipt Checklist (SRC)

Instructions: Please take note of any NO checkmarks.

If we receive no response concerning these items within 24 hours of the date of this notice, all the samples will be analyzed as requested.

Client: Vertex Resource Services Inc.

Date Received: 05/09/24 05:00

Work Order ID: E405122

Phone: (575) 748-0176

Date Logged In: 05/08/24 15:09

Logged In By: Alexa Michaels

Email: cdixon@vertex.ca

Due Date: 05/10/24 17:00 (1 day TAT)

Chain of Custody (COC)

1. Does the sample ID match the COC? Yes
2. Does the number of samples per sampling site location match the COC? Yes
3. Were samples dropped off by client or carrier? Yes
4. Was the COC complete, i.e., signatures, dates/times, requested analyses? Yes
5. Were all samples received within holding time? Yes

Note: Analysis, such as pH which should be conducted in the field, i.e., 15 minute hold time, are not included in this discussion.

Carrier: CourierComments/ResolutionSample Turn Around Time (TAT)

6. Did the COC indicate standard TAT, or Expedited TAT? Yes

Sample Cooler

7. Was a sample cooler received? Yes
8. If yes, was cooler received in good condition? Yes
9. Was the sample(s) received intact, i.e., not broken? Yes
10. Were custody/security seals present? No
11. If yes, were custody/security seals intact? NA
12. Was the sample received on ice? If yes, the recorded temp is 4°C, i.e., 6°±2°C Yes

Note: Thermal preservation is not required, if samples are received w/i 15 minutes of sampling

13. If no visible ice, record the temperature. Actual sample temperature: 4°C

Sample Container

14. Are aqueous VOC samples present? No
15. Are VOC samples collected in VOA Vials? NA
16. Is the head space less than 6-8 mm (pea sized or less)? NA
17. Was a trip blank (TB) included for VOC analyses? NA
18. Are non-VOC samples collected in the correct containers? Yes
19. Is the appropriate volume/weight or number of sample containers collected? Yes

Field Label

20. Were field sample labels filled out with the minimum information:
  - Sample ID? Yes
  - Date/Time Collected? Yes
  - Collectors name? Yes

Sample Preservation

21. Does the COC or field labels indicate the samples were preserved? No
22. Are sample(s) correctly preserved? NA
24. Is lab filtration required and/or requested for dissolved metals? No

Multiphase Sample Matrix

26. Does the sample have more than one phase, i.e., multiphase? No
27. If yes, does the COC specify which phase(s) is to be analyzed? NA

Subcontract Laboratory

28. Are samples required to get sent to a subcontract laboratory? No
29. Was a subcontract laboratory specified by the client and if so who? NA Subcontract Lab: NA

Client Instruction

Signature of client authorizing changes to the COC or sample disposition.

Date



envirotech Inc.



Report to:  
Chance Dixon



# envirotech

*Practical Solutions for a Better Tomorrow*

## Analytical Report

Vertex Resource Services Inc.

Project Name: Zeus SWD Line

Work Order: E405134

Job Number: 24015-0001

Received: 5/10/2024

Revision: 1

Report Reviewed By:

Walter Hinchman  
Laboratory Director  
5/13/24

5796 U.S. Hwy 64  
Farmington, NM 87401

Phone: (505) 632-1881  
Envirotech-inc.com



Envirotech Inc. certifies the test results meet all requirements of TNI unless noted otherwise.  
Statement of Data Authenticity: Envirotech Inc. attests the data reported has not been altered in any way.  
Partial or incomplete reproduction of this report is prohibited, unless approved by Envirotech Inc.  
Envirotech Inc. holds the Utah TNI certification NM00979 for data reported.  
Envirotech Inc. holds the Texas TNI certification T104704557 for data reported.

Date Reported: 5/13/24

Chance Dixon  
3101 Boyd Drive  
Carlsbad, NM 88220



Project Name: Zeus SWD Line  
Workorder: E405134  
Date Received: 5/10/2024 5:00:00AM

Chance Dixon,

Thank you for choosing Envirotech, Inc. as your analytical testing laboratory for the sample(s) received on, 5/10/2024 5:00:00AM, under the Project Name: Zeus SWD Line.

The analytical test results summarized in this report with the Project Name: Zeus SWD Line apply to the individual samples collected, identified and submitted bearing the project name on the enclosed chain-of-custody. Subcontracted sample analyses not conducted by Envirotech, Inc., are attached in full as issued by the subcontract laboratory.

Please review the Chain-of-Custody (COC) and Sample Receipt Checklist (SRC) for any issues regarding sample receipt temperature, containers, preservation etc. To best understand your test results, review the entire report summarizing your sample data and the associated quality control batch data.

All reported data in this analytical report were analyzed according to the referenced method(s) and are in compliance with the latest NELAC/TNI standards, unless otherwise noted. Samples or analytical quality control parameters not meeting specific QC criteria are qualified with a data flag. Data flag definitions are located in the Notes and Definitions section of this analytical report.

If you have any questions concerning this report, please feel free to contact Envirotech, Inc.

Respectfully,

**Walter Hinchman**  
Laboratory Director  
Office: 505-632-1881  
Cell: 775-287-1762  
[whinchman@envirotech-inc.com](mailto:whinchman@envirotech-inc.com)

**Raina Schwanz**  
Laboratory Administrator  
Office: 505-632-1881  
[rainaschwanz@envirotech-inc.com](mailto:rainaschwanz@envirotech-inc.com)

**Alexa Michaels**  
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[mgonzales@envirotech-inc.com](mailto:mgonzales@envirotech-inc.com)

Envirotech Web Address: [www.envirotech-inc.com](http://www.envirotech-inc.com)

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Sample Summary

Vertex Resource Services Inc.	Project Name:	Zeus SWD Line	Reported:
3101 Boyd Drive	Project Number:	24015-0001	
Carlsbad NM, 88220	Project Manager:	Chance Dixon	05/13/24 17:19

Client Sample ID	Lab Sample ID	Matrix	Sampled	Received	Container
WES24-39	E405134-01A	Soil	05/07/24	05/10/24	Glass Jar, 2 oz.



Sample Data

Vertex Resource Services Inc. 3101 Boyd Drive Carlsbad NM, 88220	Project Name: Zeus SWD Line Project Number: 24015-0001 Project Manager: Chance Dixon	Reported: 5/13/2024 5:19:54PM
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WES24-39  
E405134-01

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
<b>Volatile Organics by EPA 8021B</b>	mg/kg	mg/kg	Analyst: BA		Batch: 2419171	
Benzene	ND	0.0250	1	05/10/24	05/11/24	
Ethylbenzene	ND	0.0250	1	05/10/24	05/11/24	
Toluene	ND	0.0250	1	05/10/24	05/11/24	
o-Xylene	ND	0.0250	1	05/10/24	05/11/24	
p,m-Xylene	ND	0.0500	1	05/10/24	05/11/24	
Total Xylenes	ND	0.0250	1	05/10/24	05/11/24	
Surrogate: 4-Bromochlorobenzene-PID	94.3 %	70-130		05/10/24	05/11/24	
<b>Nonhalogenated Organics by EPA 8015D - GRO</b>	mg/kg	mg/kg	Analyst: BA		Batch: 2419171	
Gasoline Range Organics (C6-C10)	ND	20.0	1	05/10/24	05/11/24	
Surrogate: 1-Chloro-4-fluorobenzene-FID	108 %	70-130		05/10/24	05/11/24	
<b>Nonhalogenated Organics by EPA 8015D - DRO/ORO</b>	mg/kg	mg/kg	Analyst: KM		Batch: 2419173	
Diesel Range Organics (C10-C28)	ND	25.0	1	05/10/24	05/13/24	
Oil Range Organics (C28-C36)	ND	50.0	1	05/10/24	05/13/24	
Surrogate: n-Nonane	104 %	50-200		05/10/24	05/13/24	
<b>Anions by EPA 300.0/9056A</b>	mg/kg	mg/kg	Analyst: IY		Batch: 2420002	
Chloride	930	20.0	1	05/13/24	05/13/24	





QC Summary Data

Vertex Resource Services Inc. 3101 Boyd Drive Carlsbad NM, 88220	Project Name: Zeus SWD Line Project Number: 24015-0001 Project Manager: Chance Dixon	Reported:  5/13/2024 5:19:54PM
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Volatile Organics by EPA 8021B

Analyst: BA

Analyte	Result mg/kg	Reporting Limit mg/kg	Spike Level mg/kg	Source Result mg/kg	Rec %	Rec Limits %	RPD %	RPD Limit %	Notes
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Blank (2419171-BLK1) Prepared: 05/10/24 Analyzed: 05/10/24

Benzene	ND	0.0250							
Ethylbenzene	ND	0.0250							
Toluene	ND	0.0250							
o-Xylene	ND	0.0250							
p,m-Xylene	ND	0.0500							
Total Xylenes	ND	0.0250							
Surrogate: 4-Bromochlorobenzene-PID	7.33		8.00		91.7	70-130			

LCS (2419171-BS1) Prepared: 05/10/24 Analyzed: 05/10/24

Benzene	5.22	0.0250	5.00		104	70-130			
Ethylbenzene	5.02	0.0250	5.00		100	70-130			
Toluene	5.23	0.0250	5.00		105	70-130			
o-Xylene	5.15	0.0250	5.00		103	70-130			
p,m-Xylene	10.3	0.0500	10.0		103	70-130			
Total Xylenes	15.5	0.0250	15.0		103	70-130			
Surrogate: 4-Bromochlorobenzene-PID	7.41		8.00		92.7	70-130			

Matrix Spike (2419171-MS1) Source: E405125-22 Prepared: 05/10/24 Analyzed: 05/10/24

Benzene	4.86	0.0250	5.00	ND	97.2	54-133			
Ethylbenzene	4.72	0.0250	5.00	ND	94.3	61-133			
Toluene	4.89	0.0250	5.00	ND	97.7	61-130			
o-Xylene	4.84	0.0250	5.00	ND	96.8	63-131			
p,m-Xylene	9.72	0.0500	10.0	ND	97.2	63-131			
Total Xylenes	14.6	0.0250	15.0	ND	97.1	63-131			
Surrogate: 4-Bromochlorobenzene-PID	7.55		8.00		94.3	70-130			

Matrix Spike Dup (2419171-MSD1) Source: E405125-22 Prepared: 05/10/24 Analyzed: 05/10/24

Benzene	4.99	0.0250	5.00	ND	99.8	54-133	2.65	20	
Ethylbenzene	4.84	0.0250	5.00	ND	96.8	61-133	2.59	20	
Toluene	5.02	0.0250	5.00	ND	100	61-130	2.66	20	
o-Xylene	4.97	0.0250	5.00	ND	99.4	63-131	2.68	20	
p,m-Xylene	9.98	0.0500	10.0	ND	99.8	63-131	2.66	20	
Total Xylenes	15.0	0.0250	15.0	ND	99.7	63-131	2.67	20	
Surrogate: 4-Bromochlorobenzene-PID	7.53		8.00		94.2	70-130			



QC Summary Data

Vertex Resource Services Inc. 3101 Boyd Drive Carlsbad NM, 88220	Project Name: Zeus SWD Line Project Number: 24015-0001 Project Manager: Chance Dixon	Reported:  5/13/2024 5:19:54PM
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Nonhalogenated Organics by EPA 8015D - GRO

Analyst: BA

Analyte	Result mg/kg	Reporting Limit mg/kg	Spike Level mg/kg	Source Result mg/kg	Rec %	Rec Limits %	RPD %	RPD Limit %	Notes
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Blank (2419171-BLK1) Prepared: 05/10/24 Analyzed: 05/10/24

Gasoline Range Organics (C6-C10)	ND	20.0							
Surrogate: 1-Chloro-4-fluorobenzene-FID	8.88		8.00		111	70-130			

LCS (2419171-BS2) Prepared: 05/10/24 Analyzed: 05/10/24

Gasoline Range Organics (C6-C10)	49.2	20.0	50.0		98.5	70-130			
Surrogate: 1-Chloro-4-fluorobenzene-FID	8.84		8.00		111	70-130			

Matrix Spike (2419171-MS2) Source: E405125-22 Prepared: 05/10/24 Analyzed: 05/10/24

Gasoline Range Organics (C6-C10)	50.9	20.0	50.0	ND	102	70-130			
Surrogate: 1-Chloro-4-fluorobenzene-FID	8.65		8.00		108	70-130			

Matrix Spike Dup (2419171-MSD2) Source: E405125-22 Prepared: 05/10/24 Analyzed: 05/11/24

Gasoline Range Organics (C6-C10)	49.6	20.0	50.0	ND	99.2	70-130	2.60	20	
Surrogate: 1-Chloro-4-fluorobenzene-FID	8.73		8.00		109	70-130			



QC Summary Data

Vertex Resource Services Inc. 3101 Boyd Drive Carlsbad NM, 88220	Project Name: Zeus SWD Line Project Number: 24015-0001 Project Manager: Chance Dixon	Reported:  5/13/2024 5:19:54PM
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Nonhalogenated Organics by EPA 8015D - DRO/ORO

Analyst: KM

Analyte	Result mg/kg	Reporting Limit mg/kg	Spike Level mg/kg	Source Result mg/kg	Rec %	Rec Limits %	RPD %	RPD Limit %	Notes
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Blank (2419173-BLK1) Prepared: 05/10/24 Analyzed: 05/12/24

Diesel Range Organics (C10-C28)	ND	25.0							
Oil Range Organics (C28-C36)	ND	50.0							
Surrogate: n-Nonane	53.5		50.0		107	50-200			

LCS (2419173-BS1) Prepared: 05/10/24 Analyzed: 05/12/24

Diesel Range Organics (C10-C28)	327	25.0	250		131	38-132			
Surrogate: n-Nonane	56.5		50.0		113	50-200			

LCS Dup (2419173-BSD1) Prepared: 05/10/24 Analyzed: 05/12/24

Diesel Range Organics (C10-C28)	323	25.0	250		129	38-132	1.24	20	
Surrogate: n-Nonane	56.6		50.0		113	50-200			



QC Summary Data

Vertex Resource Services Inc. 3101 Boyd Drive Carlsbad NM, 88220	Project Name: Zeus SWD Line Project Number: 24015-0001 Project Manager: Chance Dixon	Reported:  5/13/2024 5:19:54PM
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Anions by EPA 300.0/9056A

Analyst: IY

Analyte	Result mg/kg	Reporting Limit mg/kg	Spike Level mg/kg	Source Result mg/kg	Rec %	Rec Limits %	RPD %	RPD Limit %	Notes
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Blank (2420002-BLK1)					Prepared: 05/13/24 Analyzed: 05/13/24				
Chloride	ND	20.0							
LCS (2420002-BS1)					Prepared: 05/13/24 Analyzed: 05/13/24				
Chloride	250	20.0	250		99.9	90-110			
LCS Dup (2420002-BSD1)					Prepared: 05/13/24 Analyzed: 05/13/24				
Chloride	249	20.0	250		99.6	90-110	0.293	20	

QC Summary Report Comment:  
Calculations are based off of the raw (non-rounded) data. However, for reporting purposes all QC data is rounded to three significant figures.  
Therefore, hand calculated values may differ slightly.

Definitions and Notes

Vertex Resource Services Inc.	Project Name:	Zeus SWD Line	
3101 Boyd Drive	Project Number:	24015-0001	Reported:
Carlsbad NM, 88220	Project Manager:	Chance Dixon	05/13/24 17:19

- ND      Analyte NOT DETECTED at or above the reporting limit
- NR      Not Reported
- RPD      Relative Percent Difference
- DNI      Did Not Ignite
- DNR      Did not react with the addition of acid or base.
- Note (1): Methods marked with \*\* are non-accredited methods.
- Note (2): Soil data is reported on an "as received" weight basis, unless reported otherwise.







## Envirotech Analytical Laboratory

Printed: 5/10/2024 9:29:23AM

## Sample Receipt Checklist (SRC)

Instructions: Please take note of any NO checkmarks.

If we receive no response concerning these items within 24 hours of the date of this notice, all the samples will be analyzed as requested.

Client:	Vertex Resource Services Inc.	Date Received:	05/10/24 05:00	Work Order ID:	E405134
Phone:	(575) 748-0176	Date Logged In:	05/09/24 13:53	Logged In By:	Alexa Michaels
Email:	cdixon@vertex.ca	Due Date:	05/13/24 17:00 (1 day TAT)		

**Chain of Custody (COC)**

1. Does the sample ID match the COC? Yes
2. Does the number of samples per sampling site location match the COC? Yes
3. Were samples dropped off by client or carrier? Yes
4. Was the COC complete, i.e., signatures, dates/times, requested analyses? Yes
5. Were all samples received within holding time? Yes

Note: Analysis, such as pH which should be conducted in the field, i.e., 15 minute hold time, are not included in this discussion.

Carrier: Courier**Comments/Resolution****Sample Turn Around Time (TAT)**

6. Did the COC indicate standard TAT, or Expedited TAT? Yes

**Sample Cooler**

7. Was a sample cooler received? Yes
8. If yes, was cooler received in good condition? Yes
9. Was the sample(s) received intact, i.e., not broken? Yes
10. Were custody/security seals present? No
11. If yes, were custody/security seals intact? NA
12. Was the sample received on ice? If yes, the recorded temp is 4°C, i.e., 6°±2°C? Yes

Note: Thermal preservation is not required, if samples are received w/i 15 minutes of sampling

13. If no visible ice, record the temperature. Actual sample temperature: 4°C

**Sample Container**

14. Are aqueous VOC samples present? No
15. Are VOC samples collected in VOA Vials? NA
16. Is the head space less than 6-8 mm (pea sized or less)? NA
17. Was a trip blank (TB) included for VOC analyses? NA
18. Are non-VOC samples collected in the correct containers? Yes
19. Is the appropriate volume/weight or number of sample containers collected? Yes

**Field Label**

20. Were field sample labels filled out with the minimum information:  
Sample ID? Yes  
Date/Time Collected? Yes  
Collectors name? Yes

**Sample Preservation**

21. Does the COC or field labels indicate the samples were preserved? No
22. Are sample(s) correctly preserved? NA
24. Is lab filtration required and/or requested for dissolved metals? No

**Multiphase Sample Matrix**

26. Does the sample have more than one phase, i.e., multiphase? No
27. If yes, does the COC specify which phase(s) is to be analyzed? NA

**Subcontract Laboratory**

28. Are samples required to get sent to a subcontract laboratory? No
29. Was a subcontract laboratory specified by the client and if so who? NA Subcontract Lab: NA

**Client Instruction**

Signature of client authorizing changes to the COC or sample disposition.

Date



envirotech Inc.

Report to:  
Chance Dixon



# envirotech

*Practical Solutions for a Better Tomorrow*

## Analytical Report

Vertex Resource Services Inc.

Project Name: Zeus SWD Line

Work Order: E405156

Job Number: 24015-0003

Received: 5/13/2024

Revision: 1

Report Reviewed By:

Walter Hinchman  
Laboratory Director  
5/14/24

5796 U.S. Hwy 64  
Farmington, NM 87401

Phone: (505) 632-1881  
Envirotech-inc.com



Envirotech Inc. certifies the test results meet all requirements of TNI unless noted otherwise.  
Statement of Data Authenticity: Envirotech Inc. attests the data reported has not been altered in any way.  
Partial or incomplete reproduction of this report is prohibited, unless approved by Envirotech Inc.  
Envirotech Inc. holds the Utah TNI certification NM00979 for data reported.  
Envirotech Inc. holds the Texas TNI certification T104704557 for data reported.



Date Reported: 5/14/24

Chance Dixon  
3101 Boyd Drive  
Carlsbad, NM 88220



Project Name: Zeus SWD Line  
Workorder: E405156  
Date Received: 5/13/2024 6:15:00AM

Chance Dixon,

Thank you for choosing Envirotech, Inc. as your analytical testing laboratory for the sample(s) received on, 5/13/2024 6:15:00AM, under the Project Name: Zeus SWD Line.

The analytical test results summarized in this report with the Project Name: Zeus SWD Line apply to the individual samples collected, identified and submitted bearing the project name on the enclosed chain-of-custody. Subcontracted sample analyses not conducted by Envirotech, Inc., are attached in full as issued by the subcontract laboratory.

Please review the Chain-of-Custody (COC) and Sample Receipt Checklist (SRC) for any issues regarding sample receipt temperature, containers, preservation etc. To best understand your test results, review the entire report summarizing your sample data and the associated quality control batch data.

All reported data in this analytical report were analyzed according to the referenced method(s) and are in compliance with the latest NELAC/TNI standards, unless otherwise noted. Samples or analytical quality control parameters not meeting specific QC criteria are qualified with a data flag. Data flag definitions are located in the Notes and Definitions section of this analytical report.

If you have any questions concerning this report, please feel free to contact Envirotech, Inc.

Respectfully,

**Walter Hinchman**  
Laboratory Director  
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Cell: 775-287-1762  
[whinchman@envirotech-inc.com](mailto:whinchman@envirotech-inc.com)

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Envirotech Web Address: [www.envirotech-inc.com](http://www.envirotech-inc.com)

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Sample Summary

Vertex Resource Services Inc. 3101 Boyd Drive Carlsbad NM, 88220	Project Name: Zeus SWD Line Project Number: 24015-0003 Project Manager: Chance Dixon	Reported: 05/14/24 13:44
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Client Sample ID	Lab Sample ID	Matrix	Sampled	Received	Container
WES24 - 40	E405156-01A	Soil	05/09/24	05/13/24	Glass Jar, 2 oz.
WES24 - 41	E405156-02A	Soil	05/09/24	05/13/24	Glass Jar, 2 oz.
WES24 - 42	E405156-03A	Soil	05/09/24	05/13/24	Glass Jar, 2 oz.
WES24 - 43	E405156-04A	Soil	05/09/24	05/13/24	Glass Jar, 2 oz.





Sample Data

Vertex Resource Services Inc. 3101 Boyd Drive Carlsbad NM, 88220	Project Name: Zeus SWD Line Project Number: 24015-0003 Project Manager: Chance Dixon	Reported: 5/14/2024 1:44:53PM
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WES24 - 40  
E405156-01

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
<b>Volatile Organics by EPA 8021B</b>	mg/kg	mg/kg	Analyst: EG		Batch: 2420003	
Benzene	ND	0.0250	1	05/13/24	05/13/24	
Ethylbenzene	ND	0.0250	1	05/13/24	05/13/24	
Toluene	ND	0.0250	1	05/13/24	05/13/24	
o-Xylene	ND	0.0250	1	05/13/24	05/13/24	
p,m-Xylene	ND	0.0500	1	05/13/24	05/13/24	
Total Xylenes	ND	0.0250	1	05/13/24	05/13/24	
Surrogate: 4-Bromochlorobenzene-PID	90.4 %	70-130		05/13/24	05/13/24	
<b>Nonhalogenated Organics by EPA 8015D - GRO</b>	mg/kg	mg/kg	Analyst: EG		Batch: 2420003	
Gasoline Range Organics (C6-C10)	ND	20.0	1	05/13/24	05/13/24	
Surrogate: 1-Chloro-4-fluorobenzene-FID	95.9 %	70-130		05/13/24	05/13/24	
<b>Nonhalogenated Organics by EPA 8015D - DRO/ORO</b>	mg/kg	mg/kg	Analyst: KM		Batch: 2420001	
Diesel Range Organics (C10-C28)	ND	25.0	1	05/13/24	05/13/24	
Oil Range Organics (C28-C36)	ND	50.0	1	05/13/24	05/13/24	
Surrogate: n-Nonane	105 %	50-200		05/13/24	05/13/24	
<b>Anions by EPA 300.0/9056A</b>	mg/kg	mg/kg	Analyst: JM		Batch: 2420002	
Chloride	ND	20.0	1	05/13/24	05/13/24	



Sample Data

Vertex Resource Services Inc. 3101 Boyd Drive Carlsbad NM, 88220	Project Name: Zeus SWD Line Project Number: 24015-0003 Project Manager: Chance Dixon	Reported: 5/14/2024 1:44:53PM
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WES24 - 41  
E405156-02

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
<b>Volatile Organics by EPA 8021B</b>	mg/kg	mg/kg	Analyst: EG		Batch: 2420003	
Benzene	ND	0.0250	1	05/13/24	05/13/24	
Ethylbenzene	ND	0.0250	1	05/13/24	05/13/24	
Toluene	ND	0.0250	1	05/13/24	05/13/24	
o-Xylene	ND	0.0250	1	05/13/24	05/13/24	
p,m-Xylene	ND	0.0500	1	05/13/24	05/13/24	
Total Xylenes	ND	0.0250	1	05/13/24	05/13/24	
Surrogate: 4-Bromochlorobenzene-PID	90.7 %	70-130		05/13/24	05/13/24	
<b>Nonhalogenated Organics by EPA 8015D - GRO</b>	mg/kg	mg/kg	Analyst: EG		Batch: 2420003	
Gasoline Range Organics (C6-C10)	ND	20.0	1	05/13/24	05/13/24	
Surrogate: 1-Chloro-4-fluorobenzene-FID	95.1 %	70-130		05/13/24	05/13/24	
<b>Nonhalogenated Organics by EPA 8015D - DRO/ORO</b>	mg/kg	mg/kg	Analyst: KM		Batch: 2420001	
Diesel Range Organics (C10-C28)	ND	25.0	1	05/13/24	05/13/24	
Oil Range Organics (C28-C36)	ND	50.0	1	05/13/24	05/13/24	
Surrogate: n-Nonane	107 %	50-200		05/13/24	05/13/24	
<b>Anions by EPA 300.0/9056A</b>	mg/kg	mg/kg	Analyst: JM		Batch: 2420002	
Chloride	ND	20.0	1	05/13/24	05/13/24	



Sample Data

Vertex Resource Services Inc. 3101 Boyd Drive Carlsbad NM, 88220	Project Name: Zeus SWD Line Project Number: 24015-0003 Project Manager: Chance Dixon	Reported: 5/14/2024 1:44:53PM
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WES24 - 42  
E405156-03

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
<b>Volatile Organics by EPA 8021B</b>						
	mg/kg	mg/kg	Analyst: EG		Batch: 2420003	
Benzene	ND	0.0250	1	05/13/24	05/13/24	
Ethylbenzene	ND	0.0250	1	05/13/24	05/13/24	
Toluene	ND	0.0250	1	05/13/24	05/13/24	
o-Xylene	ND	0.0250	1	05/13/24	05/13/24	
p,m-Xylene	ND	0.0500	1	05/13/24	05/13/24	
Total Xylenes	ND	0.0250	1	05/13/24	05/13/24	
<i>Surrogate: 4-Bromochlorobenzene-PID</i>						
	91.5 %	70-130		05/13/24	05/13/24	
<b>Nonhalogenated Organics by EPA 8015D - GRO</b>						
	mg/kg	mg/kg	Analyst: EG		Batch: 2420003	
Gasoline Range Organics (C6-C10)	ND	20.0	1	05/13/24	05/13/24	
<i>Surrogate: 1-Chloro-4-fluorobenzene-FID</i>						
	96.1 %	70-130		05/13/24	05/13/24	
<b>Nonhalogenated Organics by EPA 8015D - DRO/ORO</b>						
	mg/kg	mg/kg	Analyst: KM		Batch: 2420001	
Diesel Range Organics (C10-C28)	ND	25.0	1	05/13/24	05/13/24	
Oil Range Organics (C28-C36)	ND	50.0	1	05/13/24	05/13/24	
<i>Surrogate: n-Nonane</i>						
	103 %	50-200		05/13/24	05/13/24	
<b>Anions by EPA 300.0/9056A</b>						
	mg/kg	mg/kg	Analyst: JM		Batch: 2420002	
Chloride	2700	40.0	2	05/13/24	05/13/24	



## Sample Data

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

Project Name: Zeus SWD Line  
Project Number: 24015-0003  
Project Manager: Chance Dixon

**Reported:**  
5/14/2024 1:44:53PM

## WES24 - 43

## E405156-04

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
<b>Volatile Organics by EPA 8021B</b>						
	mg/kg	mg/kg		Analyst: EG		Batch: 2420003
Benzene	ND	0.0250	1	05/13/24	05/13/24	
Ethylbenzene	ND	0.0250	1	05/13/24	05/13/24	
Toluene	ND	0.0250	1	05/13/24	05/13/24	
o-Xylene	ND	0.0250	1	05/13/24	05/13/24	
p,m-Xylene	ND	0.0500	1	05/13/24	05/13/24	
Total Xylenes	ND	0.0250	1	05/13/24	05/13/24	
<i>Surrogate: 4-Bromochlorobenzene-PID</i>						
	90.8 %	70-130		05/13/24	05/13/24	
<b>Nonhalogenated Organics by EPA 8015D - GRO</b>						
	mg/kg	mg/kg		Analyst: EG		Batch: 2420003
Gasoline Range Organics (C6-C10)	ND	20.0	1	05/13/24	05/13/24	
<i>Surrogate: 1-Chloro-4-fluorobenzene-FID</i>						
	95.0 %	70-130		05/13/24	05/13/24	
<b>Nonhalogenated Organics by EPA 8015D - DRO/ORO</b>						
	mg/kg	mg/kg		Analyst: KM		Batch: 2420001
Diesel Range Organics (C10-C28)	ND	25.0	1	05/13/24	05/13/24	
Oil Range Organics (C28-C36)	ND	50.0	1	05/13/24	05/13/24	
<i>Surrogate: n-Nonane</i>						
	108 %	50-200		05/13/24	05/13/24	
<b>Anions by EPA 300.0/9056A</b>						
	mg/kg	mg/kg		Analyst: JM		Batch: 2420002
Chloride	ND	20.0	1	05/13/24	05/13/24	



QC Summary Data

Vertex Resource Services Inc. 3101 Boyd Drive Carlsbad NM, 88220	Project Name: Zeus SWD Line Project Number: 24015-0003 Project Manager: Chance Dixon	Reported:  5/14/2024 1:44:53PM
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Volatile Organics by EPA 8021B

Analyst: EG

Analyte	Result mg/kg	Reporting Limit mg/kg	Spike Level mg/kg	Source Result mg/kg	Rec %	Rec Limits %	RPD %	RPD Limit %	Notes
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Blank (2420003-BLK1) Prepared: 05/13/24 Analyzed: 05/13/24

Benzene	ND	0.0250							
Ethylbenzene	ND	0.0250							
Toluene	ND	0.0250							
o-Xylene	ND	0.0250							
p,m-Xylene	ND	0.0500							
Total Xylenes	ND	0.0250							
Surrogate: 4-Bromochlorobenzene-PID	7.26		8.00		90.7	70-130			

LCS (2420003-BS1) Prepared: 05/13/24 Analyzed: 05/13/24

Benzene	4.98	0.0250	5.00		99.6	70-130			
Ethylbenzene	4.84	0.0250	5.00		96.9	70-130			
Toluene	4.92	0.0250	5.00		98.3	70-130			
o-Xylene	4.82	0.0250	5.00		96.3	70-130			
p,m-Xylene	9.85	0.0500	10.0		98.5	70-130			
Total Xylenes	14.7	0.0250	15.0		97.7	70-130			
Surrogate: 4-Bromochlorobenzene-PID	7.21		8.00		90.2	70-130			

Matrix Spike (2420003-MS1) Source: E405156-02 Prepared: 05/13/24 Analyzed: 05/13/24

Benzene	5.03	0.0250	5.00	ND	101	54-133			
Ethylbenzene	4.86	0.0250	5.00	ND	97.3	61-133			
Toluene	4.95	0.0250	5.00	ND	99.0	61-130			
o-Xylene	4.84	0.0250	5.00	ND	96.8	63-131			
p,m-Xylene	9.87	0.0500	10.0	ND	98.7	63-131			
Total Xylenes	14.7	0.0250	15.0	ND	98.1	63-131			
Surrogate: 4-Bromochlorobenzene-PID	7.28		8.00		91.0	70-130			

Matrix Spike Dup (2420003-MSD1) Source: E405156-02 Prepared: 05/13/24 Analyzed: 05/13/24

Benzene	5.06	0.0250	5.00	ND	101	54-133	0.645	20	
Ethylbenzene	4.91	0.0250	5.00	ND	98.2	61-133	1.01	20	
Toluene	5.00	0.0250	5.00	ND	99.9	61-130	0.871	20	
o-Xylene	4.89	0.0250	5.00	ND	97.8	63-131	0.990	20	
p,m-Xylene	9.97	0.0500	10.0	ND	99.7	63-131	0.995	20	
Total Xylenes	14.9	0.0250	15.0	ND	99.1	63-131	0.993	20	
Surrogate: 4-Bromochlorobenzene-PID	7.21		8.00		90.2	70-130			



QC Summary Data

Vertex Resource Services Inc. 3101 Boyd Drive Carlsbad NM, 88220	Project Name: Zeus SWD Line Project Number: 24015-0003 Project Manager: Chance Dixon	Reported:  5/14/2024 1:44:53PM
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Nonhalogenated Organics by EPA 8015D - GRO

Analyst: EG

Analyte	Result mg/kg	Reporting Limit mg/kg	Spike Level mg/kg	Source Result mg/kg	Rec %	Rec Limits %	RPD %	RPD Limit %	Notes
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Blank (2420003-BLK1) Prepared: 05/13/24 Analyzed: 05/13/24

Gasoline Range Organics (C6-C10)	ND	20.0							
Surrogate: 1-Chloro-4-fluorobenzene-FID	7.60		8.00		95.0	70-130			

LCS (2420003-BS2) Prepared: 05/13/24 Analyzed: 05/13/24

Gasoline Range Organics (C6-C10)	49.7	20.0	50.0		99.4	70-130			
Surrogate: 1-Chloro-4-fluorobenzene-FID	7.71		8.00		96.3	70-130			

Matrix Spike (2420003-MS2) Source: E405156-02 Prepared: 05/13/24 Analyzed: 05/13/24

Gasoline Range Organics (C6-C10)	49.7	20.0	50.0	ND	99.4	70-130			
Surrogate: 1-Chloro-4-fluorobenzene-FID	7.71		8.00		96.4	70-130			

Matrix Spike Dup (2420003-MSD2) Source: E405156-02 Prepared: 05/13/24 Analyzed: 05/13/24

Gasoline Range Organics (C6-C10)	49.4	20.0	50.0	ND	98.7	70-130	0.648	20	
Surrogate: 1-Chloro-4-fluorobenzene-FID	7.69		8.00		96.1	70-130			





QC Summary Data

Vertex Resource Services Inc. 3101 Boyd Drive Carlsbad NM, 88220	Project Name: Zeus SWD Line Project Number: 24015-0003 Project Manager: Chance Dixon	Reported:  5/14/2024 1:44:53PM
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Nonhalogenated Organics by EPA 8015D - DRO/ORO

Analyst: KM

Analyte	Result mg/kg	Reporting Limit mg/kg	Spike Level mg/kg	Source Result mg/kg	Rec %	Rec Limits %	RPD %	RPD Limit %	Notes
---------	-----------------	-----------------------------	-------------------------	---------------------------	----------	--------------------	----------	-------------------	-------

Blank (2420001-BLK1)					Prepared: 05/13/24 Analyzed: 05/13/24				
Diesel Range Organics (C10-C28)	ND	25.0							
Oil Range Organics (C28-C36)	ND	50.0							
Surrogate: n-Nonane	56.7		50.0		113	50-200			

LCS (2420001-BS1)					Prepared: 05/13/24 Analyzed: 05/13/24				
Diesel Range Organics (C10-C28)	272	25.0	250		109	38-132			
Surrogate: n-Nonane	56.5		50.0		113	50-200			

LCS Dup (2420001-BSD1)					Prepared: 05/13/24 Analyzed: 05/13/24				
Diesel Range Organics (C10-C28)	270	25.0	250		108	38-132	0.686	20	
Surrogate: n-Nonane	56.5		50.0		113	50-200			



QC Summary Data

Vertex Resource Services Inc. 3101 Boyd Drive Carlsbad NM, 88220	Project Name: Zeus SWD Line Project Number: 24015-0003 Project Manager: Chance Dixon	Reported:  5/14/2024 1:44:53PM
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Anions by EPA 300.0/9056A

Analyst: IY

Analyte	Result mg/kg	Reporting Limit mg/kg	Spike Level mg/kg	Source Result mg/kg	Rec %	Rec Limits %	RPD %	RPD Limit %	Notes
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Blank (2420002-BLK1)					Prepared: 05/13/24 Analyzed: 05/13/24				
Chloride	ND	20.0							
LCS (2420002-BS1)					Prepared: 05/13/24 Analyzed: 05/13/24				
Chloride	250	20.0	250		99.9	90-110			
LCS Dup (2420002-BSD1)					Prepared: 05/13/24 Analyzed: 05/13/24				
Chloride	249	20.0	250		99.6	90-110	0.293	20	

QC Summary Report Comment:  
Calculations are based off of the raw (non-rounded) data. However, for reporting purposes all QC data is rounded to three significant figures.  
Therefore, hand calculated values may differ slightly.



Definitions and Notes

Vertex Resource Services Inc.	Project Name:	Zeus SWD Line	
3101 Boyd Drive	Project Number:	24015-0003	Reported:
Carlsbad NM, 88220	Project Manager:	Chance Dixon	05/14/24 13:44

- ND      Analyte NOT DETECTED at or above the reporting limit
- NR      Not Reported
- RPD      Relative Percent Difference
- DNI      Did Not Ignite
- DNR      Did not react with the addition of acid or base.
- Note (1): Methods marked with \*\* are non-accredited methods.
- Note (2): Soil data is reported on an "as received" weight basis, unless reported otherwise.



[illegible]

## Envirotech Analytical Laboratory

Printed: 5/13/2024 9:37:36AM

## Sample Receipt Checklist (SRC)

Instructions: Please take note of any NO checkmarks.

If we receive no response concerning these items within 24 hours of the date of this notice, all the samples will be analyzed as requested.

Client:	Vertex Resource Services Inc.	Date Received:	05/13/24 06:15	Work Order ID:	E405156
Phone:	(575) 748-0176	Date Logged In:	05/10/24 14:15	Logged In By:	Angelina Pineda
Email:	cdixon@vertex.ca	Due Date:	05/14/24 17:00 (1 day TAT)		

Chain of Custody (COC)

1. Does the sample ID match the COC? Yes
2. Does the number of samples per sampling site location match the COC? Yes
3. Were samples dropped off by client or carrier? Yes
4. Was the COC complete, i.e., signatures, dates/times, requested analyses? Yes
5. Were all samples received within holding time? Yes

Note: Analysis, such as pH which should be conducted in the field, i.e., 15 minute hold time, are not included in this discussion.

Carrier: CourierComments/ResolutionSample Turn Around Time (TAT)

6. Did the COC indicate standard TAT, or Expedited TAT? Yes

Sample Cooler

7. Was a sample cooler received? Yes
8. If yes, was cooler received in good condition? Yes
9. Was the sample(s) received intact, i.e., not broken? Yes
10. Were custody/security seals present? No
11. If yes, were custody/security seals intact? NA
12. Was the sample received on ice? If yes, the recorded temp is 4°C, i.e., 6°±2°C? Yes

Note: Thermal preservation is not required, if samples are received w/i 15 minutes of sampling

13. If no visible ice, record the temperature. Actual sample temperature: 4°C

Sample Container

14. Are aqueous VOC samples present? No
15. Are VOC samples collected in VOA Vials? NA
16. Is the head space less than 6-8 mm (pea sized or less)? NA
17. Was a trip blank (TB) included for VOC analyses? NA
18. Are non-VOC samples collected in the correct containers? Yes
19. Is the appropriate volume/weight or number of sample containers collected? Yes

Field Label

20. Were field sample labels filled out with the minimum information:
  - Sample ID? Yes
  - Date/Time Collected? Yes
  - Collectors name? Yes

Sample Preservation

21. Does the COC or field labels indicate the samples were preserved? No
22. Are sample(s) correctly preserved? NA
24. Is lab filtration required and/or requested for dissolved metals? No

Multiphase Sample Matrix

26. Does the sample have more than one phase, i.e., multiphase? No
27. If yes, does the COC specify which phase(s) is to be analyzed? NA

Subcontract Laboratory

28. Are samples required to get sent to a subcontract laboratory? No
29. Was a subcontract laboratory specified by the client and if so who? NA Subcontract Lab: NA

Client Instruction

Signature of client authorizing changes to the COC or sample disposition.

Date



envirotech Inc.

Report to:  
Chance Dixon



# envirotech

*Practical Solutions for a Better Tomorrow*

## Analytical Report

Vertex Resource Services Inc.

Project Name: Zeus SWD Line

Work Order: E405166

Job Number: 24015-0003

Received: 5/14/2024

Revision: 1

Report Reviewed By:

Walter Hinchman  
Laboratory Director  
5/16/24

5796 U.S. Hwy 64  
Farmington, NM 87401

Phone: (505) 632-1881  
Envirotech-inc.com



Envirotech Inc. certifies the test results meet all requirements of TNI unless noted otherwise.  
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Envirotech Inc. holds the Utah TNI certification NM00979 for data reported.  
Envirotech Inc. holds the Texas TNI certification T104704557 for data reported.



Date Reported: 5/16/24

Chance Dixon  
3101 Boyd Drive  
Carlsbad, NM 88220



Project Name: Zeus SWD Line  
Workorder: E405166  
Date Received: 5/14/2024 6:00:00AM

Chance Dixon,

Thank you for choosing Envirotech, Inc. as your analytical testing laboratory for the sample(s) received on, 5/14/2024 6:00:00AM, under the Project Name: Zeus SWD Line.

The analytical test results summarized in this report with the Project Name: Zeus SWD Line apply to the individual samples collected, identified and submitted bearing the project name on the enclosed chain-of-custody. Subcontracted sample analyses not conducted by Envirotech, Inc., are attached in full as issued by the subcontract laboratory.

Please review the Chain-of-Custody (COC) and Sample Receipt Checklist (SRC) for any issues regarding sample receipt temperature, containers, preservation etc. To best understand your test results, review the entire report summarizing your sample data and the associated quality control batch data.

All reported data in this analytical report were analyzed according to the referenced method(s) and are in compliance with the latest NELAC/TNI standards, unless otherwise noted. Samples or analytical quality control parameters not meeting specific QC criteria are qualified with a data flag. Data flag definitions are located in the Notes and Definitions section of this analytical report.

If you have any questions concerning this report, please feel free to contact Envirotech, Inc.

Respectfully,

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Sample Summary

Vertex Resource Services Inc. 3101 Boyd Drive Carlsbad NM, 88220	Project Name: Zeus SWD Line Project Number: 24015-0003 Project Manager: Chance Dixon	Reported: 05/16/24 14:12
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Client Sample ID	Lab Sample ID	Matrix	Sampled	Received	Container
WES 24 -44 4ft	E405166-01A	Soil	05/10/24	05/14/24	Glass Jar, 2 oz.
WES 24 -45 4ft	E405166-02A	Soil	05/10/24	05/14/24	Glass Jar, 2 oz.
WES 24 -46 4ft	E405166-03A	Soil	05/10/24	05/14/24	Glass Jar, 2 oz.
WES 24 -47 4ft	E405166-04A	Soil	05/10/24	05/14/24	Glass Jar, 2 oz.
WES 24 -48 4ft	E405166-05A	Soil	05/10/24	05/14/24	Glass Jar, 2 oz.
WES 24 -49 4ft	E405166-06A	Soil	05/10/24	05/14/24	Glass Jar, 2 oz.
WES 24 -50 4ft	E405166-07A	Soil	05/10/24	05/14/24	Glass Jar, 2 oz.
WES 24 -51 4ft	E405166-08A	Soil	05/10/24	05/14/24	Glass Jar, 2 oz.
WES 24 - 52 4FT	E405166-09A	Soil	05/10/24	05/14/24	Glass Jar, 2 oz.
BES 24 - 03 4FT	E405166-10A	Soil	05/10/24	05/14/24	Glass Jar, 2 oz.
BES 24 - 04 4FT	E405166-11A	Soil	05/10/24	05/14/24	Glass Jar, 2 oz.
BES 24 - 05 4FT	E405166-12A	Soil	05/10/24	05/14/24	Glass Jar, 2 oz.
BES 24 - 06 4FT	E405166-13A	Soil	05/10/24	05/14/24	Glass Jar, 2 oz.
BES 24 - 07 4FT	E405166-14A	Soil	05/10/24	05/14/24	Glass Jar, 2 oz.
BES 24 - 08 4FT	E405166-15A	Soil	05/10/24	05/14/24	Glass Jar, 2 oz.
BES 24 - 09 4FT	E405166-16A	Soil	05/10/24	05/14/24	Glass Jar, 2 oz.
BES 24 - 10 4FT	E405166-17A	Soil	05/10/24	05/14/24	Glass Jar, 2 oz.
BES 24 - 11 4FT	E405166-18A	Soil	05/10/24	05/14/24	Glass Jar, 2 oz.



Sample Data

Vertex Resource Services Inc. 3101 Boyd Drive Carlsbad NM, 88220	Project Name: Zeus SWD Line Project Number: 24015-0003 Project Manager: Chance Dixon	Reported: 5/16/2024 2:12:15PM
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WES 24 -44 4ft

E405166-01

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
<b>Volatile Organics by EPA 8021B</b>	mg/kg	mg/kg	Analyst: BA		Batch: 2420036	
Benzene	ND	0.0250	1	05/14/24	05/15/24	
Ethylbenzene	ND	0.0250	1	05/14/24	05/15/24	
Toluene	ND	0.0250	1	05/14/24	05/15/24	
o-Xylene	ND	0.0250	1	05/14/24	05/15/24	
p,m-Xylene	ND	0.0500	1	05/14/24	05/15/24	
Total Xylenes	ND	0.0250	1	05/14/24	05/15/24	
Surrogate: 4-Bromochlorobenzene-PID	93.2 %	70-130		05/14/24	05/15/24	
<b>Nonhalogenated Organics by EPA 8015D - GRO</b>	mg/kg	mg/kg	Analyst: BA		Batch: 2420036	
Gasoline Range Organics (C6-C10)	ND	20.0	1	05/14/24	05/15/24	
Surrogate: 1-Chloro-4-fluorobenzene-FID	108 %	70-130		05/14/24	05/15/24	
<b>Nonhalogenated Organics by EPA 8015D - DRO/ORO</b>	mg/kg	mg/kg	Analyst: KM		Batch: 2420049	
Diesel Range Organics (C10-C28)	ND	25.0	1	05/14/24	05/14/24	
Oil Range Organics (C28-C36)	ND	50.0	1	05/14/24	05/14/24	
Surrogate: n-Nonane	103 %	50-200		05/14/24	05/14/24	
<b>Anions by EPA 300.0/9056A</b>	mg/kg	mg/kg	Analyst: IY		Batch: 2420062	
Chloride	242	20.0	1	05/14/24	05/14/24	



Sample Data

Vertex Resource Services Inc. 3101 Boyd Drive Carlsbad NM, 88220	Project Name: Zeus SWD Line Project Number: 24015-0003 Project Manager: Chance Dixon	Reported: 5/16/2024 2:12:15PM
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WES 24 -45 4ft  
E405166-02

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
<b>Volatile Organics by EPA 8021B</b>						
	mg/kg	mg/kg	Analyst: BA		Batch: 2420036	
Benzene	ND	0.0250	1	05/14/24	05/15/24	
Ethylbenzene	ND	0.0250	1	05/14/24	05/15/24	
Toluene	ND	0.0250	1	05/14/24	05/15/24	
o-Xylene	ND	0.0250	1	05/14/24	05/15/24	
p,m-Xylene	ND	0.0500	1	05/14/24	05/15/24	
Total Xylenes	ND	0.0250	1	05/14/24	05/15/24	
<i>Surrogate: 4-Bromochlorobenzene-PID</i>						
	93.2 %	70-130		05/14/24	05/15/24	
<b>Nonhalogenated Organics by EPA 8015D - GRO</b>						
	mg/kg	mg/kg	Analyst: BA		Batch: 2420036	
Gasoline Range Organics (C6-C10)	ND	20.0	1	05/14/24	05/15/24	
<i>Surrogate: 1-Chloro-4-fluorobenzene-FID</i>						
	108 %	70-130		05/14/24	05/15/24	
<b>Nonhalogenated Organics by EPA 8015D - DRO/ORO</b>						
	mg/kg	mg/kg	Analyst: KM		Batch: 2420049	
Diesel Range Organics (C10-C28)	ND	25.0	1	05/14/24	05/14/24	
Oil Range Organics (C28-C36)	ND	50.0	1	05/14/24	05/14/24	
<i>Surrogate: n-Nonane</i>						
	91.2 %	50-200		05/14/24	05/14/24	
<b>Anions by EPA 300.0/9056A</b>						
	mg/kg	mg/kg	Analyst: IY		Batch: 2420062	
Chloride	577	20.0	1	05/14/24	05/14/24	





Sample Data

Vertex Resource Services Inc. 3101 Boyd Drive Carlsbad NM, 88220	Project Name: Zeus SWD Line Project Number: 24015-0003 Project Manager: Chance Dixon	Reported: 5/16/2024 2:12:15PM
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WES 24 -46 4ft  
E405166-03

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
<b>Volatile Organics by EPA 8021B</b>						
	mg/kg	mg/kg	Analyst: BA		Batch: 2420036	
Benzene	ND	0.0250	1	05/14/24	05/15/24	
Ethylbenzene	ND	0.0250	1	05/14/24	05/15/24	
Toluene	ND	0.0250	1	05/14/24	05/15/24	
o-Xylene	ND	0.0250	1	05/14/24	05/15/24	
p,m-Xylene	ND	0.0500	1	05/14/24	05/15/24	
Total Xylenes	ND	0.0250	1	05/14/24	05/15/24	
<i>Surrogate: 4-Bromochlorobenzene-PID</i>						
	93.8 %	70-130		05/14/24	05/15/24	
<b>Nonhalogenated Organics by EPA 8015D - GRO</b>						
	mg/kg	mg/kg	Analyst: BA		Batch: 2420036	
Gasoline Range Organics (C6-C10)	ND	20.0	1	05/14/24	05/15/24	
<i>Surrogate: 1-Chloro-4-fluorobenzene-FID</i>						
	106 %	70-130		05/14/24	05/15/24	
<b>Nonhalogenated Organics by EPA 8015D - DRO/ORO</b>						
	mg/kg	mg/kg	Analyst: KM		Batch: 2420049	
Diesel Range Organics (C10-C28)	ND	25.0	1	05/14/24	05/14/24	
Oil Range Organics (C28-C36)	ND	50.0	1	05/14/24	05/14/24	
<i>Surrogate: n-Nonane</i>						
	92.3 %	50-200		05/14/24	05/14/24	
<b>Anions by EPA 300.0/9056A</b>						
	mg/kg	mg/kg	Analyst: IY		Batch: 2420062	
Chloride	358	20.0	1	05/14/24	05/14/24	



Sample Data

Vertex Resource Services Inc. 3101 Boyd Drive Carlsbad NM, 88220	Project Name: Zeus SWD Line Project Number: 24015-0003 Project Manager: Chance Dixon	Reported: 5/16/2024 2:12:15PM
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WES 24 -47 4ft  
E405166-04

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
<b>Volatile Organics by EPA 8021B</b>						
	mg/kg	mg/kg	Analyst: BA		Batch: 2420036	
Benzene	ND	0.0250	1	05/14/24	05/15/24	
Ethylbenzene	ND	0.0250	1	05/14/24	05/15/24	
Toluene	ND	0.0250	1	05/14/24	05/15/24	
o-Xylene	ND	0.0250	1	05/14/24	05/15/24	
p,m-Xylene	ND	0.0500	1	05/14/24	05/15/24	
Total Xylenes	ND	0.0250	1	05/14/24	05/15/24	
<i>Surrogate: 4-Bromochlorobenzene-PID</i>						
	92.8 %	70-130		05/14/24	05/15/24	
<b>Nonhalogenated Organics by EPA 8015D - GRO</b>						
	mg/kg	mg/kg	Analyst: BA		Batch: 2420036	
Gasoline Range Organics (C6-C10)	ND	20.0	1	05/14/24	05/15/24	
<i>Surrogate: 1-Chloro-4-fluorobenzene-FID</i>						
	108 %	70-130		05/14/24	05/15/24	
<b>Nonhalogenated Organics by EPA 8015D - DRO/ORO</b>						
	mg/kg	mg/kg	Analyst: KM		Batch: 2420049	
Diesel Range Organics (C10-C28)	ND	25.0	1	05/14/24	05/14/24	
Oil Range Organics (C28-C36)	ND	50.0	1	05/14/24	05/14/24	
<i>Surrogate: n-Nonane</i>						
	94.2 %	50-200		05/14/24	05/14/24	
<b>Anions by EPA 300.0/9056A</b>						
	mg/kg	mg/kg	Analyst: IY		Batch: 2420062	
Chloride	1610	20.0	1	05/14/24	05/14/24	



Sample Data

Vertex Resource Services Inc. 3101 Boyd Drive Carlsbad NM, 88220	Project Name: Zeus SWD Line Project Number: 24015-0003 Project Manager: Chance Dixon	Reported: 5/16/2024 2:12:15PM
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WES 24 -48 4ft  
E405166-05

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
<b>Volatile Organics by EPA 8021B</b>	mg/kg	mg/kg	Analyst: BA		Batch: 2420036	
Benzene	ND	0.0250	1	05/14/24	05/15/24	
Ethylbenzene	ND	0.0250	1	05/14/24	05/15/24	
Toluene	ND	0.0250	1	05/14/24	05/15/24	
o-Xylene	ND	0.0250	1	05/14/24	05/15/24	
p,m-Xylene	ND	0.0500	1	05/14/24	05/15/24	
Total Xylenes	ND	0.0250	1	05/14/24	05/15/24	
Surrogate: 4-Bromochlorobenzene-PID	93.5 %	70-130		05/14/24	05/15/24	
<b>Nonhalogenated Organics by EPA 8015D - GRO</b>	mg/kg	mg/kg	Analyst: BA		Batch: 2420036	
Gasoline Range Organics (C6-C10)	ND	20.0	1	05/14/24	05/15/24	
Surrogate: 1-Chloro-4-fluorobenzene-FID	107 %	70-130		05/14/24	05/15/24	
<b>Nonhalogenated Organics by EPA 8015D - DRO/ORO</b>	mg/kg	mg/kg	Analyst: KM		Batch: 2420049	
Diesel Range Organics (C10-C28)	ND	25.0	1	05/14/24	05/14/24	
Oil Range Organics (C28-C36)	ND	50.0	1	05/14/24	05/14/24	
Surrogate: n-Nonane	93.5 %	50-200		05/14/24	05/14/24	
<b>Anions by EPA 300.0/9056A</b>	mg/kg	mg/kg	Analyst: IY		Batch: 2420062	
Chloride	ND	20.0	1	05/14/24	05/14/24	



Sample Data

Vertex Resource Services Inc. 3101 Boyd Drive Carlsbad NM, 88220	Project Name: Zeus SWD Line Project Number: 24015-0003 Project Manager: Chance Dixon	Reported: 5/16/2024 2:12:15PM
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WES 24 -49 4ft  
E405166-06

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
<b>Volatile Organics by EPA 8021B</b>						
	mg/kg	mg/kg	Analyst: RAS		Batch: 2420036	
Benzene	ND	0.0250	1	05/14/24	05/15/24	
Ethylbenzene	ND	0.0250	1	05/14/24	05/15/24	
Toluene	ND	0.0250	1	05/14/24	05/15/24	
o-Xylene	ND	0.0250	1	05/14/24	05/15/24	
p,m-Xylene	ND	0.0500	1	05/14/24	05/15/24	
Total Xylenes	ND	0.0250	1	05/14/24	05/15/24	
<i>Surrogate: 4-Bromochlorobenzene-PID</i>						
	93.0 %	70-130		05/14/24	05/15/24	
<b>Nonhalogenated Organics by EPA 8015D - GRO</b>						
	mg/kg	mg/kg	Analyst: RAS		Batch: 2420036	
Gasoline Range Organics (C6-C10)	ND	20.0	1	05/14/24	05/15/24	
<i>Surrogate: 1-Chloro-4-fluorobenzene-FID</i>						
	92.8 %	70-130		05/14/24	05/15/24	
<b>Nonhalogenated Organics by EPA 8015D - DRO/ORO</b>						
	mg/kg	mg/kg	Analyst: KM		Batch: 2420049	
Diesel Range Organics (C10-C28)	ND	25.0	1	05/14/24	05/15/24	
Oil Range Organics (C28-C36)	ND	50.0	1	05/14/24	05/15/24	
<i>Surrogate: n-Nonane</i>						
	94.1 %	50-200		05/14/24	05/15/24	
<b>Anions by EPA 300.0/9056A</b>						
	mg/kg	mg/kg	Analyst: IY		Batch: 2420062	
Chloride	ND	20.0	1	05/14/24	05/14/24	



Sample Data

Vertex Resource Services Inc. 3101 Boyd Drive Carlsbad NM, 88220	Project Name: Zeus SWD Line Project Number: 24015-0003 Project Manager: Chance Dixon	Reported: 5/16/2024 2:12:15PM
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WES 24 -50 4ft  
E405166-07

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
<b>Volatile Organics by EPA 8021B</b>						
	mg/kg	mg/kg		Analyst: RAS		Batch: 2420036
Benzene	ND	0.0250	1	05/14/24	05/15/24	
Ethylbenzene	ND	0.0250	1	05/14/24	05/15/24	
Toluene	ND	0.0250	1	05/14/24	05/15/24	
o-Xylene	ND	0.0250	1	05/14/24	05/15/24	
p,m-Xylene	ND	0.0500	1	05/14/24	05/15/24	
Total Xylenes	ND	0.0250	1	05/14/24	05/15/24	
<i>Surrogate: 4-Bromochlorobenzene-PID</i>						
	92.3 %	70-130		05/14/24	05/15/24	
<b>Nonhalogenated Organics by EPA 8015D - GRO</b>						
	mg/kg	mg/kg		Analyst: RAS		Batch: 2420036
Gasoline Range Organics (C6-C10)	ND	20.0	1	05/14/24	05/15/24	
<i>Surrogate: 1-Chloro-4-fluorobenzene-FID</i>						
	92.9 %	70-130		05/14/24	05/15/24	
<b>Nonhalogenated Organics by EPA 8015D - DRO/ORO</b>						
	mg/kg	mg/kg		Analyst: KM		Batch: 2420049
Diesel Range Organics (C10-C28)	ND	25.0	1	05/14/24	05/15/24	
Oil Range Organics (C28-C36)	ND	50.0	1	05/14/24	05/15/24	
<i>Surrogate: n-Nonane</i>						
	94.1 %	50-200		05/14/24	05/15/24	
<b>Anions by EPA 300.0/9056A</b>						
	mg/kg	mg/kg		Analyst: IY		Batch: 2420062
Chloride	64.8	20.0	1	05/14/24	05/14/24	



Sample Data

Vertex Resource Services Inc. 3101 Boyd Drive Carlsbad NM, 88220	Project Name: Zeus SWD Line Project Number: 24015-0003 Project Manager: Chance Dixon	Reported: 5/16/2024 2:12:15PM
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WES 24 -51 4ft  
E405166-08

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
<b>Volatile Organics by EPA 8021B</b>						
	mg/kg	mg/kg		Analyst: RAS		Batch: 2420036
Benzene	ND	0.0250	1	05/14/24	05/15/24	
Ethylbenzene	ND	0.0250	1	05/14/24	05/15/24	
Toluene	ND	0.0250	1	05/14/24	05/15/24	
o-Xylene	ND	0.0250	1	05/14/24	05/15/24	
p,m-Xylene	ND	0.0500	1	05/14/24	05/15/24	
Total Xylenes	ND	0.0250	1	05/14/24	05/15/24	
<i>Surrogate: 4-Bromochlorobenzene-PID</i>						
	93.1 %	70-130		05/14/24	05/15/24	
<b>Nonhalogenated Organics by EPA 8015D - GRO</b>						
	mg/kg	mg/kg		Analyst: RAS		Batch: 2420036
Gasoline Range Organics (C6-C10)	ND	20.0	1	05/14/24	05/15/24	
<i>Surrogate: 1-Chloro-4-fluorobenzene-FID</i>						
	93.5 %	70-130		05/14/24	05/15/24	
<b>Nonhalogenated Organics by EPA 8015D - DRO/ORO</b>						
	mg/kg	mg/kg		Analyst: KM		Batch: 2420049
Diesel Range Organics (C10-C28)	ND	25.0	1	05/14/24	05/15/24	
Oil Range Organics (C28-C36)	ND	50.0	1	05/14/24	05/15/24	
<i>Surrogate: n-Nonane</i>						
	93.8 %	50-200		05/14/24	05/15/24	
<b>Anions by EPA 300.0/9056A</b>						
	mg/kg	mg/kg		Analyst: IY		Batch: 2420062
Chloride	ND	20.0	1	05/14/24	05/14/24	





Sample Data

Vertex Resource Services Inc. 3101 Boyd Drive Carlsbad NM, 88220	Project Name: Zeus SWD Line Project Number: 24015-0003 Project Manager: Chance Dixon	Reported: 5/16/2024 2:12:15PM
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WES 24 - 52 4FT  
E405166-09

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
<b>Volatile Organics by EPA 8021B</b>						
	mg/kg	mg/kg		Analyst: RAS		Batch: 2420036
Benzene	ND	0.0250	1	05/14/24	05/15/24	
Ethylbenzene	ND	0.0250	1	05/14/24	05/15/24	
Toluene	ND	0.0250	1	05/14/24	05/15/24	
o-Xylene	ND	0.0250	1	05/14/24	05/15/24	
p,m-Xylene	ND	0.0500	1	05/14/24	05/15/24	
Total Xylenes	ND	0.0250	1	05/14/24	05/15/24	
<i>Surrogate: 4-Bromochlorobenzene-PID</i>						
	93.4 %	70-130		05/14/24	05/15/24	
<b>Nonhalogenated Organics by EPA 8015D - GRO</b>						
	mg/kg	mg/kg		Analyst: RAS		Batch: 2420036
Gasoline Range Organics (C6-C10)	ND	20.0	1	05/14/24	05/15/24	
<i>Surrogate: 1-Chloro-4-fluorobenzene-FID</i>						
	94.4 %	70-130		05/14/24	05/15/24	
<b>Nonhalogenated Organics by EPA 8015D - DRO/ORO</b>						
	mg/kg	mg/kg		Analyst: KM		Batch: 2420049
Diesel Range Organics (C10-C28)	ND	25.0	1	05/14/24	05/15/24	
Oil Range Organics (C28-C36)	ND	50.0	1	05/14/24	05/15/24	
<i>Surrogate: n-Nonane</i>						
	93.5 %	50-200		05/14/24	05/15/24	
<b>Anions by EPA 300.0/9056A</b>						
	mg/kg	mg/kg		Analyst: IY		Batch: 2420062
Chloride	178	20.0	1	05/14/24	05/14/24	



Sample Data

Vertex Resource Services Inc. 3101 Boyd Drive Carlsbad NM, 88220	Project Name: Zeus SWD Line Project Number: 24015-0003 Project Manager: Chance Dixon	Reported: 5/16/2024 2:12:15PM
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BES 24 - 03 4FT  
E405166-10

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
<b>Volatile Organics by EPA 8021B</b>	mg/kg	mg/kg	Analyst: RAS		Batch: 2420036	
Benzene	ND	0.0250	1	05/14/24	05/15/24	
Ethylbenzene	ND	0.0250	1	05/14/24	05/15/24	
Toluene	ND	0.0250	1	05/14/24	05/15/24	
o-Xylene	ND	0.0250	1	05/14/24	05/15/24	
p,m-Xylene	ND	0.0500	1	05/14/24	05/15/24	
Total Xylenes	ND	0.0250	1	05/14/24	05/15/24	
Surrogate: 4-Bromochlorobenzene-PID	93.3 %	70-130		05/14/24	05/15/24	
<b>Nonhalogenated Organics by EPA 8015D - GRO</b>	mg/kg	mg/kg	Analyst: RAS		Batch: 2420036	
Gasoline Range Organics (C6-C10)	ND	20.0	1	05/14/24	05/15/24	
Surrogate: 1-Chloro-4-fluorobenzene-FID	93.0 %	70-130		05/14/24	05/15/24	
<b>Nonhalogenated Organics by EPA 8015D - DRO/ORO</b>	mg/kg	mg/kg	Analyst: KM		Batch: 2420049	
Diesel Range Organics (C10-C28)	ND	25.0	1	05/14/24	05/15/24	
Oil Range Organics (C28-C36)	ND	50.0	1	05/14/24	05/15/24	
Surrogate: n-Nonane	91.6 %	50-200		05/14/24	05/15/24	
<b>Anions by EPA 300.0/9056A</b>	mg/kg	mg/kg	Analyst: IY		Batch: 2420062	
Chloride	1610	20.0	1	05/14/24	05/14/24	



Sample Data

Vertex Resource Services Inc. 3101 Boyd Drive Carlsbad NM, 88220	Project Name: Zeus SWD Line Project Number: 24015-0003 Project Manager: Chance Dixon	Reported: 5/16/2024 2:12:15PM
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BES 24 - 04 4FT  
E405166-11

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
<b>Volatile Organics by EPA 8021B</b>	mg/kg	mg/kg	Analyst: RAS		Batch: 2420036	
Benzene	ND	0.0250	1	05/14/24	05/15/24	
Ethylbenzene	ND	0.0250	1	05/14/24	05/15/24	
Toluene	ND	0.0250	1	05/14/24	05/15/24	
o-Xylene	ND	0.0250	1	05/14/24	05/15/24	
p,m-Xylene	ND	0.0500	1	05/14/24	05/15/24	
Total Xylenes	ND	0.0250	1	05/14/24	05/15/24	
Surrogate: 4-Bromochlorobenzene-PID	92.7 %	70-130		05/14/24	05/15/24	
<b>Nonhalogenated Organics by EPA 8015D - GRO</b>	mg/kg	mg/kg	Analyst: RAS		Batch: 2420036	
Gasoline Range Organics (C6-C10)	ND	20.0	1	05/14/24	05/15/24	
Surrogate: 1-Chloro-4-fluorobenzene-FID	92.8 %	70-130		05/14/24	05/15/24	
<b>Nonhalogenated Organics by EPA 8015D - DRO/ORO</b>	mg/kg	mg/kg	Analyst: KM		Batch: 2420049	
Diesel Range Organics (C10-C28)	ND	25.0	1	05/14/24	05/15/24	
Oil Range Organics (C28-C36)	ND	50.0	1	05/14/24	05/15/24	
Surrogate: n-Nonane	88.5 %	50-200		05/14/24	05/15/24	
<b>Anions by EPA 300.0/9056A</b>	mg/kg	mg/kg	Analyst: IY		Batch: 2420062	
Chloride	1750	40.0	2	05/14/24	05/14/24	



## Sample Data

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

Project Name: Zeus SWD Line  
Project Number: 24015-0003  
Project Manager: Chance Dixon

**Reported:**  
5/16/2024 2:12:15PM

## BES 24 - 05 4FT

## E405166-12

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
<b>Volatile Organics by EPA 8021B</b>						
	mg/kg	mg/kg		Analyst: RAS		Batch: 2420036
Benzene	ND	0.0250	1	05/14/24	05/15/24	
Ethylbenzene	ND	0.0250	1	05/14/24	05/15/24	
Toluene	ND	0.0250	1	05/14/24	05/15/24	
o-Xylene	ND	0.0250	1	05/14/24	05/15/24	
p,m-Xylene	ND	0.0500	1	05/14/24	05/15/24	
Total Xylenes	ND	0.0250	1	05/14/24	05/15/24	
<i>Surrogate: 4-Bromochlorobenzene-PID</i>						
	93.3 %	70-130		05/14/24	05/15/24	
<b>Nonhalogenated Organics by EPA 8015D - GRO</b>						
	mg/kg	mg/kg		Analyst: RAS		Batch: 2420036
Gasoline Range Organics (C6-C10)	ND	20.0	1	05/14/24	05/15/24	
<i>Surrogate: 1-Chloro-4-fluorobenzene-FID</i>						
	94.9 %	70-130		05/14/24	05/15/24	
<b>Nonhalogenated Organics by EPA 8015D - DRO/ORO</b>						
	mg/kg	mg/kg		Analyst: KM		Batch: 2420049
Diesel Range Organics (C10-C28)	ND	25.0	1	05/14/24	05/15/24	
Oil Range Organics (C28-C36)	ND	50.0	1	05/14/24	05/15/24	
<i>Surrogate: n-Nonane</i>						
	92.6 %	50-200		05/14/24	05/15/24	
<b>Anions by EPA 300.0/9056A</b>						
	mg/kg	mg/kg		Analyst: IY		Batch: 2420062
Chloride	1750	40.0	2	05/14/24	05/14/24	



Sample Data

Vertex Resource Services Inc. 3101 Boyd Drive Carlsbad NM, 88220	Project Name: Zeus SWD Line Project Number: 24015-0003 Project Manager: Chance Dixon	Reported: 5/16/2024 2:12:15PM
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BES 24 - 06 4FT  
E405166-13

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
<b>Volatile Organics by EPA 8021B</b>	mg/kg	mg/kg	Analyst: RAS		Batch: 2420036	
Benzene	ND	0.0250	1	05/14/24	05/15/24	
Ethylbenzene	ND	0.0250	1	05/14/24	05/15/24	
Toluene	ND	0.0250	1	05/14/24	05/15/24	
o-Xylene	ND	0.0250	1	05/14/24	05/15/24	
p,m-Xylene	ND	0.0500	1	05/14/24	05/15/24	
Total Xylenes	ND	0.0250	1	05/14/24	05/15/24	
Surrogate: 4-Bromochlorobenzene-PID	92.7 %	70-130		05/14/24	05/15/24	
<b>Nonhalogenated Organics by EPA 8015D - GRO</b>	mg/kg	mg/kg	Analyst: RAS		Batch: 2420036	
Gasoline Range Organics (C6-C10)	ND	20.0	1	05/14/24	05/15/24	
Surrogate: 1-Chloro-4-fluorobenzene-FID	95.7 %	70-130		05/14/24	05/15/24	
<b>Nonhalogenated Organics by EPA 8015D - DRO/ORO</b>	mg/kg	mg/kg	Analyst: KM		Batch: 2420049	
Diesel Range Organics (C10-C28)	ND	25.0	1	05/14/24	05/15/24	
Oil Range Organics (C28-C36)	ND	50.0	1	05/14/24	05/15/24	
Surrogate: n-Nonane	92.4 %	50-200		05/14/24	05/15/24	
<b>Anions by EPA 300.0/9056A</b>	mg/kg	mg/kg	Analyst: IY		Batch: 2420062	
Chloride	1580	40.0	2	05/14/24	05/14/24	



Sample Data

Vertex Resource Services Inc. 3101 Boyd Drive Carlsbad NM, 88220	Project Name: Zeus SWD Line Project Number: 24015-0003 Project Manager: Chance Dixon	Reported: 5/16/2024 2:12:15PM
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BES 24 - 07 4FT  
E405166-14

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
<b>Volatile Organics by EPA 8021B</b>	mg/kg	mg/kg	Analyst: RAS		Batch: 2420036	
Benzene	ND	0.0250	1	05/14/24	05/15/24	
Ethylbenzene	ND	0.0250	1	05/14/24	05/15/24	
Toluene	ND	0.0250	1	05/14/24	05/15/24	
o-Xylene	ND	0.0250	1	05/14/24	05/15/24	
p,m-Xylene	ND	0.0500	1	05/14/24	05/15/24	
Total Xylenes	ND	0.0250	1	05/14/24	05/15/24	
Surrogate: 4-Bromochlorobenzene-PID	93.7 %	70-130		05/14/24	05/15/24	
<b>Nonhalogenated Organics by EPA 8015D - GRO</b>	mg/kg	mg/kg	Analyst: RAS		Batch: 2420036	
Gasoline Range Organics (C6-C10)	ND	20.0	1	05/14/24	05/15/24	
Surrogate: 1-Chloro-4-fluorobenzene-FID	96.4 %	70-130		05/14/24	05/15/24	
<b>Nonhalogenated Organics by EPA 8015D - DRO/ORO</b>	mg/kg	mg/kg	Analyst: KM		Batch: 2420049	
Diesel Range Organics (C10-C28)	ND	25.0	1	05/14/24	05/15/24	
Oil Range Organics (C28-C36)	ND	50.0	1	05/14/24	05/15/24	
Surrogate: n-Nonane	93.3 %	50-200		05/14/24	05/15/24	
<b>Anions by EPA 300.0/9056A</b>	mg/kg	mg/kg	Analyst: IY		Batch: 2420062	
Chloride	1990	40.0	2	05/14/24	05/15/24	





Sample Data

Vertex Resource Services Inc. 3101 Boyd Drive Carlsbad NM, 88220	Project Name: Zeus SWD Line Project Number: 24015-0003 Project Manager: Chance Dixon	Reported: 5/16/2024 2:12:15PM
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BES 24 - 08 4FT  
E405166-15

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
<b>Volatile Organics by EPA 8021B</b>						
	mg/kg	mg/kg		Analyst: RAS		Batch: 2420036
Benzene	ND	0.0250	1	05/14/24	05/15/24	
Ethylbenzene	ND	0.0250	1	05/14/24	05/15/24	
Toluene	ND	0.0250	1	05/14/24	05/15/24	
o-Xylene	ND	0.0250	1	05/14/24	05/15/24	
p,m-Xylene	ND	0.0500	1	05/14/24	05/15/24	
Total Xylenes	ND	0.0250	1	05/14/24	05/15/24	
<i>Surrogate: 4-Bromochlorobenzene-PID</i>						
	93.9 %	70-130		05/14/24	05/15/24	
<b>Nonhalogenated Organics by EPA 8015D - GRO</b>						
	mg/kg	mg/kg		Analyst: RAS		Batch: 2420036
Gasoline Range Organics (C6-C10)	ND	20.0	1	05/14/24	05/15/24	
<i>Surrogate: 1-Chloro-4-fluorobenzene-FID</i>						
	96.0 %	70-130		05/14/24	05/15/24	
<b>Nonhalogenated Organics by EPA 8015D - DRO/ORO</b>						
	mg/kg	mg/kg		Analyst: KM		Batch: 2420049
Diesel Range Organics (C10-C28)	ND	25.0	1	05/14/24	05/15/24	
Oil Range Organics (C28-C36)	ND	50.0	1	05/14/24	05/15/24	
<i>Surrogate: n-Nonane</i>						
	92.6 %	50-200		05/14/24	05/15/24	
<b>Anions by EPA 300.0/9056A</b>						
	mg/kg	mg/kg		Analyst: IY		Batch: 2420062
Chloride	1420	20.0	1	05/14/24	05/15/24	



Sample Data

Vertex Resource Services Inc. 3101 Boyd Drive Carlsbad NM, 88220	Project Name: Zeus SWD Line Project Number: 24015-0003 Project Manager: Chance Dixon	Reported: 5/16/2024 2:12:15PM
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BES 24 - 09 4FT  
E405166-16

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
<b>Volatile Organics by EPA 8021B</b>	mg/kg	mg/kg	Analyst: RAS		Batch: 2420036	
Benzene	ND	0.0250	1	05/14/24	05/15/24	
Ethylbenzene	ND	0.0250	1	05/14/24	05/15/24	
Toluene	ND	0.0250	1	05/14/24	05/15/24	
o-Xylene	ND	0.0250	1	05/14/24	05/15/24	
p,m-Xylene	ND	0.0500	1	05/14/24	05/15/24	
Total Xylenes	ND	0.0250	1	05/14/24	05/15/24	
Surrogate: 4-Bromochlorobenzene-PID	92.9 %	70-130		05/14/24	05/15/24	
<b>Nonhalogenated Organics by EPA 8015D - GRO</b>	mg/kg	mg/kg	Analyst: RAS		Batch: 2420036	
Gasoline Range Organics (C6-C10)	ND	20.0	1	05/14/24	05/15/24	
Surrogate: 1-Chloro-4-fluorobenzene-FID	96.0 %	70-130		05/14/24	05/15/24	
<b>Nonhalogenated Organics by EPA 8015D - DRO/ORO</b>	mg/kg	mg/kg	Analyst: KM		Batch: 2420049	
Diesel Range Organics (C10-C28)	ND	25.0	1	05/14/24	05/15/24	
Oil Range Organics (C28-C36)	ND	50.0	1	05/14/24	05/15/24	
Surrogate: n-Nonane	93.0 %	50-200		05/14/24	05/15/24	
<b>Anions by EPA 300.0/9056A</b>	mg/kg	mg/kg	Analyst: IY		Batch: 2420062	
Chloride	3970	40.0	2	05/14/24	05/15/24	



Sample Data

Vertex Resource Services Inc. 3101 Boyd Drive Carlsbad NM, 88220	Project Name: Zeus SWD Line Project Number: 24015-0003 Project Manager: Chance Dixon	Reported: 5/16/2024 2:12:15PM
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BES 24 - 10 4FT  
E405166-17

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
<b>Volatile Organics by EPA 8021B</b>	mg/kg	mg/kg	Analyst: RAS		Batch: 2420036	
Benzene	ND	0.0250	1	05/14/24	05/15/24	
Ethylbenzene	ND	0.0250	1	05/14/24	05/15/24	
Toluene	ND	0.0250	1	05/14/24	05/15/24	
o-Xylene	ND	0.0250	1	05/14/24	05/15/24	
p,m-Xylene	ND	0.0500	1	05/14/24	05/15/24	
Total Xylenes	ND	0.0250	1	05/14/24	05/15/24	
Surrogate: 4-Bromochlorobenzene-PID	93.3 %	70-130		05/14/24	05/15/24	
<b>Nonhalogenated Organics by EPA 8015D - GRO</b>	mg/kg	mg/kg	Analyst: RAS		Batch: 2420036	
Gasoline Range Organics (C6-C10)	ND	20.0	1	05/14/24	05/15/24	
Surrogate: 1-Chloro-4-fluorobenzene-FID	95.3 %	70-130		05/14/24	05/15/24	
<b>Nonhalogenated Organics by EPA 8015D - DRO/ORO</b>	mg/kg	mg/kg	Analyst: KM		Batch: 2420049	
Diesel Range Organics (C10-C28)	ND	25.0	1	05/14/24	05/15/24	
Oil Range Organics (C28-C36)	ND	50.0	1	05/14/24	05/15/24	
Surrogate: n-Nonane	95.0 %	50-200		05/14/24	05/15/24	
<b>Anions by EPA 300.0/9056A</b>	mg/kg	mg/kg	Analyst: IY		Batch: 2420062	
Chloride	3120	40.0	2	05/14/24	05/15/24	



## Sample Data

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

Project Name: Zeus SWD Line  
Project Number: 24015-0003  
Project Manager: Chance Dixon

**Reported:**  
5/16/2024 2:12:15PM

## BES 24 - 11 4FT

## E405166-18

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
<b>Volatile Organics by EPA 8021B</b>						
	mg/kg	mg/kg		Analyst: RAS		Batch: 2420036
Benzene	ND	0.0250	1	05/14/24	05/15/24	
Ethylbenzene	ND	0.0250	1	05/14/24	05/15/24	
Toluene	ND	0.0250	1	05/14/24	05/15/24	
o-Xylene	ND	0.0250	1	05/14/24	05/15/24	
p,m-Xylene	ND	0.0500	1	05/14/24	05/15/24	
Total Xylenes	ND	0.0250	1	05/14/24	05/15/24	
<i>Surrogate: 4-Bromochlorobenzene-PID</i>						
	93.4 %	70-130		05/14/24	05/15/24	
<b>Nonhalogenated Organics by EPA 8015D - GRO</b>						
	mg/kg	mg/kg		Analyst: RAS		Batch: 2420036
Gasoline Range Organics (C6-C10)	ND	20.0	1	05/14/24	05/15/24	
<i>Surrogate: 1-Chloro-4-fluorobenzene-FID</i>						
	94.2 %	70-130		05/14/24	05/15/24	
<b>Nonhalogenated Organics by EPA 8015D - DRO/ORO</b>						
	mg/kg	mg/kg		Analyst: KM		Batch: 2420049
Diesel Range Organics (C10-C28)	ND	25.0	1	05/14/24	05/15/24	
Oil Range Organics (C28-C36)	ND	50.0	1	05/14/24	05/15/24	
<i>Surrogate: n-Nonane</i>						
	93.8 %	50-200		05/14/24	05/15/24	
<b>Anions by EPA 300.0/9056A</b>						
	mg/kg	mg/kg		Analyst: IY		Batch: 2420062
Chloride	5860	100	5	05/14/24	05/15/24	



QC Summary Data

Vertex Resource Services Inc. 3101 Boyd Drive Carlsbad NM, 88220	Project Name: Zeus SWD Line Project Number: 24015-0003 Project Manager: Chance Dixon	Reported:  5/16/2024 2:12:15PM
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Volatile Organics by EPA 8021B

Analyst: BA

Analyte	Result mg/kg	Reporting Limit mg/kg	Spike Level mg/kg	Source Result mg/kg	Rec %	Rec Limits %	RPD %	RPD Limit %	Notes
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Blank (2420036-BLK1) Prepared: 05/14/24 Analyzed: 05/15/24

Benzene	ND	0.0250							
Ethylbenzene	ND	0.0250							
Toluene	ND	0.0250							
o-Xylene	ND	0.0250							
p,m-Xylene	ND	0.0500							
Total Xylenes	ND	0.0250							

Surrogate: 4-Bromochlorobenzene-PID 7.57 8.00 94.7 70-130

LCS (2420036-BS1) Prepared: 05/14/24 Analyzed: 05/15/24

Benzene	4.93	0.0250	5.00		98.5	70-130			
Ethylbenzene	4.68	0.0250	5.00		93.6	70-130			
Toluene	4.88	0.0250	5.00		97.7	70-130			
o-Xylene	4.77	0.0250	5.00		95.5	70-130			
p,m-Xylene	9.64	0.0500	10.0		96.4	70-130			
Total Xylenes	14.4	0.0250	15.0		96.1	70-130			

Surrogate: 4-Bromochlorobenzene-PID 7.53 8.00 94.1 70-130

Matrix Spike (2420036-MS1) Source: E405166-04 Prepared: 05/14/24 Analyzed: 05/15/24

Benzene	5.26	0.0250	5.00	ND	105	54-133			
Ethylbenzene	4.98	0.0250	5.00	ND	99.6	61-133			
Toluene	5.21	0.0250	5.00	ND	104	61-130			
o-Xylene	5.10	0.0250	5.00	ND	102	63-131			
p,m-Xylene	10.3	0.0500	10.0	ND	103	63-131			
Total Xylenes	15.4	0.0250	15.0	ND	102	63-131			

Surrogate: 4-Bromochlorobenzene-PID 7.53 8.00 94.2 70-130

Matrix Spike Dup (2420036-MSD1) Source: E405166-04 Prepared: 05/14/24 Analyzed: 05/15/24

Benzene	5.12	0.0250	5.00	ND	102	54-133	2.70	20	
Ethylbenzene	4.87	0.0250	5.00	ND	97.4	61-133	2.23	20	
Toluene	5.08	0.0250	5.00	ND	102	61-130	2.51	20	
o-Xylene	4.97	0.0250	5.00	ND	99.4	63-131	2.52	20	
p,m-Xylene	10.0	0.0500	10.0	ND	100	63-131	2.12	20	
Total Xylenes	15.0	0.0250	15.0	ND	100	63-131	2.25	20	

Surrogate: 4-Bromochlorobenzene-PID 7.51 8.00 93.9 70-130



QC Summary Data

Vertex Resource Services Inc. 3101 Boyd Drive Carlsbad NM, 88220	Project Name: Zeus SWD Line Project Number: 24015-0003 Project Manager: Chance Dixon	Reported:  5/16/2024 2:12:15PM
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Nonhalogenated Organics by EPA 8015D - GRO

Analyst: BA

Analyte	Result mg/kg	Reporting Limit mg/kg	Spike Level mg/kg	Source Result mg/kg	Rec %	Rec Limits %	RPD %	RPD Limit %	Notes
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Blank (2420036-BLK1) Prepared: 05/14/24 Analyzed: 05/15/24

Gasoline Range Organics (C6-C10)	ND	20.0							
Surrogate: 1-Chloro-4-fluorobenzene-FID	8.52		8.00		107	70-130			

LCS (2420036-BS2) Prepared: 05/14/24 Analyzed: 05/15/24

Gasoline Range Organics (C6-C10)	55.1	20.0	50.0		110	70-130			
Surrogate: 1-Chloro-4-fluorobenzene-FID	8.83		8.00		110	70-130			

Matrix Spike (2420036-MS2) Source: E405166-04 Prepared: 05/14/24 Analyzed: 05/14/24

Gasoline Range Organics (C6-C10)	52.8	20.0	50.0	ND	106	70-130			
Surrogate: 1-Chloro-4-fluorobenzene-FID	8.80		8.00		110	70-130			

Matrix Spike Dup (2420036-MSD2) Source: E405166-04 Prepared: 05/14/24 Analyzed: 05/15/24

Gasoline Range Organics (C6-C10)	52.7	20.0	50.0	ND	105	70-130	0.278	20	
Surrogate: 1-Chloro-4-fluorobenzene-FID	8.68		8.00		109	70-130			





QC Summary Data

Vertex Resource Services Inc. 3101 Boyd Drive Carlsbad NM, 88220	Project Name: Zeus SWD Line Project Number: 24015-0003 Project Manager: Chance Dixon	Reported:  5/16/2024 2:12:15PM
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Nonhalogenated Organics by EPA 8015D - DRO/ORO

Analyst: KM

Analyte	Result mg/kg	Reporting Limit mg/kg	Spike Level mg/kg	Source Result mg/kg	Rec %	Rec Limits %	RPD %	RPD Limit %	Notes
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Blank (2420049-BLK1) Prepared: 05/14/24 Analyzed: 05/14/24

Diesel Range Organics (C10-C28)	ND	25.0							
Oil Range Organics (C28-C36)	ND	50.0							
Surrogate: n-Nonane	49.8		50.0		99.7	50-200			

LCS (2420049-BS1) Prepared: 05/14/24 Analyzed: 05/14/24

Diesel Range Organics (C10-C28)	239	25.0	250		95.5	38-132			
Surrogate: n-Nonane	48.9		50.0		97.8	50-200			

LCS Dup (2420049-BSD1) Prepared: 05/14/24 Analyzed: 05/14/24

Diesel Range Organics (C10-C28)	241	25.0	250		96.4	38-132	0.868	20	
Surrogate: n-Nonane	49.8		50.0		99.5	50-200			



QC Summary Data

Vertex Resource Services Inc. 3101 Boyd Drive Carlsbad NM, 88220	Project Name: Zeus SWD Line Project Number: 24015-0003 Project Manager: Chance Dixon	Reported:  5/16/2024 2:12:15PM
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Anions by EPA 300.0/9056A

Analyst: IY

Analyte	Result mg/kg	Reporting Limit mg/kg	Spike Level mg/kg	Source Result mg/kg	Rec %	Rec Limits %	RPD %	RPD Limit %	Notes
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Blank (2420062-BLK1)					Prepared: 05/14/24 Analyzed: 05/14/24				
Chloride	ND	20.0							
LCS (2420062-BS1)					Prepared: 05/14/24 Analyzed: 05/14/24				
Chloride	249	20.0	250		99.4	90-110			
LCS Dup (2420062-BSD1)					Prepared: 05/14/24 Analyzed: 05/14/24				
Chloride	251	20.0	250		100	90-110	0.915	20	

QC Summary Report Comment:  
Calculations are based off of the raw (non-rounded) data. However, for reporting purposes all QC data is rounded to three significant figures.  
Therefore, hand calculated values may differ slightly.



Definitions and Notes

Vertex Resource Services Inc.	Project Name:	Zeus SWD Line	
3101 Boyd Drive	Project Number:	24015-0003	Reported:
Carlsbad NM, 88220	Project Manager:	Chance Dixon	05/16/24 14:12

- ND Analyte NOT DETECTED at or above the reporting limit
  - NR Not Reported
  - RPD Relative Percent Difference
  - DNI Did Not Ignite
  - DNR Did not react with the addition of acid or base.
- Note (1): Methods marked with \*\* are non-accredited methods.
- Note (2): Soil data is reported on an "as received" weight basis, unless reported otherwise.



## Chain of Custody

Page 1 of 2

Client Information					Invoice Information			Lab Use Only			TAT				State							
Client: <u>Vertex Caprock</u>					Company: <u>Taprock</u>			Lab WO# <u>E 405166</u>			Job Number <u>24015-0003</u>				1D	2D	3D	Std	NM	CO	UT	TX
Project Name: <u>20WS SWD Line</u>					Address: <u>on file</u>														<input checked="" type="checkbox"/>			
Project Manager: <u>Chance Dixon</u>					City, State, Zip: <u></u>																	
Address: <u>on file</u>					Phone: <u></u>																	
City, State, Zip: <u></u>					Email: <u></u>																	
Phone: <u>575 988 1472</u>					Miscellaneous: <u></u>																	
Email: <u>C.Dixon@Vertex.ca</u>																						

Sample Information						Analysis and Method										EPA Program		
Time Sampled	Date Sampled	Matrix	No. of Containers	Sample ID	Field Filter	Lab Number	DRO/DRO by 8015	GRO/DRO by 8015	BTEX by 8021	VOC by 8260	Chloride 300.0	BGDOC - NM	TEEQ 1005 - TX	RCRA 8 Metals	SDWA	CWA	RCRA	
10:00	05/10/24	Soil	1	WES 24-44 4 Ft		1	4	✓	✓		✓							
10:05				WES 24-45 4 Ft		2												
10:10				WES 24-46 4 Ft		3												
10:15				WES 24-47 4 Ft		4												
10:20				WES 24-48 4 Ft		5												
10:25				WES 24-49 4 Ft		6												
10:30				WES 24-50 4 Ft		7												
10:35				<del>WES</del> WES 24-51 4 Ft		8												
10:40				WES 24-52 4 Ft		9												
12:00				BES 24-03 4 Ft		10												

Additional Instructions: CC: WWadleigh@Vertex.ca

I, (field sampler), attest to the validity and authenticity of this sample. I am aware that tampering with or intentionally mislabeling the sample location, date or time of collection is considered fraud and may be grounds for legal action.

Sampled by: Wadleigh

Relinquished by: (Signature) <u>Wadleigh</u>	Date <u>5-13-24</u>	Time <u>11:07</u>	Received by: (Signature) <u>[Signature]</u>	Date <u>5-13-24</u>	Time <u>11:07</u>	Samples requiring thermal preservation must be received on ice the day they are sampled or received packed in ice at an avg temp above 0 but less than 8C on subsequent date.  Lab Use Only Received on ice: <u>(Y) N</u>  T1 _____ T2 _____ T3 _____  AVG Temp °C <u>4</u>
Relinquished by: (Signature) <u>[Signature]</u>	Date <u>5-13-24</u>	Time <u>16:15</u>	Received by: (Signature) <u>[Signature]</u>	Date <u>5-13-24</u>	Time <u>17:45</u>	
Relinquished by: (Signature) <u>[Signature]</u>	Date <u>5-13-24</u>	Time <u>23:30</u>	Received by: (Signature) <u>[Signature]</u>	Date <u>5/14/24</u>	Time <u>06:00</u>	
Relinquished by: (Signature) _____	Date _____	Time _____	Received by: (Signature) _____	Date _____	Time _____	

Sample Matrix: S Soil, Sd - Solid, Sg - Sludge, A - Aqueous, O - Other \_\_\_\_\_

Container Type: g glass, p - poly/plastic, ag - amber glass, v - VOA \_\_\_\_\_

Note: Samples are discarded 14 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at the client expense. The report for the analysis of the above samples is applicable only to those samples received by the laboratory with this COC. The liability of the laboratory is limited to the amount paid for on the report.



# envirotech

## Chain of Custody

Page 2 of 2

Client Information					Invoice Information			Lab Use Only				TAT				State			
Client: <u>Vertex C Tap Rock</u>					Company: <u>Vertex Tap Rock</u>			Lab WO# <u>E 4051166</u>		Job Number <u>24015-0003</u>		1D		2D		3D		Std	
Project Name: <u>FEUS SWD Line</u>					Address: <u>Ontario</u>													<input checked="" type="checkbox"/> NM <input type="checkbox"/> CO <input type="checkbox"/> UT <input type="checkbox"/> TX	
Project Manager: <u>Charles Dixon</u>					City, State, Zip: <u>                    </u>														
Address: <u>Ontario</u>					Phone: <u>                    </u>														
City, State, Zip: <u>                    </u>					Email: <u>                    </u>														
Phone: <u>575 989 1472</u>					Miscellaneous: <u>                    </u>														
Email: <u>CDixon@Vertex.ca</u>																			

Sample Information						Analysis and Method										EPA Program		
Time Sampled	Date Sampled	Matrix	No. of Containers	Sample ID	Field Filter	Lab Number	DRO/DRO by 8015	GRO/DRO by 8015	BTEX by 8021	VOC by 8260	Chloride 300.0	BGDOC - NM	TCEQ 1005 - TX	RCRA 8 Metals	SDWA	CWA	RCRA	
12:05	05/10/24	soil	1	BES 24-04 4 Ft		11												
12:10				BES 24-05 4 Ft		12												
12:15				BES 24-06 4 Ft		13												
12:20				BES 24-07 4 Ft		14												
12:25				BES 24-08 4 Ft		15												
12:30				BES 24-09 4 Ft		16												
12:35				BES 24-10 4 Ft		17												
12:40				BES 24-11 4 Ft		18												

Additional Instructions: CC: WWadleigh@Vertex.ca

I, (field sampler), attest to the validity and authenticity of this sample. I am aware that tampering with or intentionally mislabeling the sample location, date or time of collection is considered fraud and may be grounds for legal action.

Sampled by: W Wadleigh

Relinquished by: (Signature) <u>W Wadleigh</u>	Date <u>5.13.24</u>	Time <u>1107</u>	Received by: (Signature) <u>[Signature]</u>	Date <u>5.13.24</u>	Time <u>1107</u>	Samples requiring thermal preservation must be received on ice the day they are sampled or received packed in ice at an avg temp above 0 but less than 6C on subsequent date.  Received on ice: <u>Y/N</u>  T1 _____ T2 _____ T3 _____  AVG Temp °C <u>4</u>
Relinquished by: (Signature) <u>[Signature]</u>	Date <u>5.13.24</u>	Time <u>1615</u>	Received by: (Signature) <u>[Signature]</u>	Date <u>5.13.24</u>	Time <u>1745</u>	
Relinquished by: (Signature) <u>[Signature]</u>	Date <u>5.13.24</u>	Time <u>2330</u>	Received by: (Signature) <u>[Signature]</u>	Date <u>5/14/24</u>	Time <u>600</u>	
Relinquished by: (Signature) <u>[Signature]</u>	Date	Time	Received by: (Signature)	Date	Time	

Sample Matrix: S Soil, Sd - Solid, Sg - Sludge, A - Aqueous, O - Other

Container Type: S glass, p - poly/plastic, ag - amber glass, v - VOA

Note: Samples are discarded 14 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at the client expense. The report for the analysis of the above samples is applicable only to those samples received by the laboratory with this COC. The liability of the laboratory is limited to the amount paid for on the report.



# envirotech

## Envirotech Analytical Laboratory

Printed: 5/14/2024 8:25:32AM

## Sample Receipt Checklist (SRC)

Instructions: Please take note of any NO checkmarks.

If we receive no response concerning these items within 24 hours of the date of this notice, all the samples will be analyzed as requested.

Client:	Vertex Resource Services Inc.	Date Received:	05/14/24 06:00	Work Order ID:	E405166
Phone:	(575) 748-0176	Date Logged In:	05/14/24 06:07	Logged In By:	Angelina Pineda
Email:	cdixon@vertex.ca	Due Date:	05/15/24 17:00 (1 day TAT)		

Chain of Custody (COC)

1. Does the sample ID match the COC? Yes
2. Does the number of samples per sampling site location match the COC? Yes
3. Were samples dropped off by client or carrier? Yes
4. Was the COC complete, i.e., signatures, dates/times, requested analyses? Yes
5. Were all samples received within holding time? Yes

Note: Analysis, such as pH which should be conducted in the field, i.e., 15 minute hold time, are not included in this discussion.

Carrier: CourierComments/ResolutionSample Turn Around Time (TAT)

6. Did the COC indicate standard TAT, or Expedited TAT? Yes

Sample Cooler

7. Was a sample cooler received? Yes
8. If yes, was cooler received in good condition? Yes
9. Was the sample(s) received intact, i.e., not broken? Yes
10. Were custody/security seals present? No
11. If yes, were custody/security seals intact? NA
12. Was the sample received on ice? If yes, the recorded temp is 4°C, i.e., 6°±2°C? Yes

Note: Thermal preservation is not required, if samples are received w/i 15 minutes of sampling

13. If no visible ice, record the temperature. Actual sample temperature: 4°C

Sample Container

14. Are aqueous VOC samples present? No
15. Are VOC samples collected in VOA Vials? NA
16. Is the head space less than 6-8 mm (pea sized or less)? NA
17. Was a trip blank (TB) included for VOC analyses? NA
18. Are non-VOC samples collected in the correct containers? Yes
19. Is the appropriate volume/weight or number of sample containers collected? Yes

Field Label

20. Were field sample labels filled out with the minimum information:  
Sample ID? Yes  
Date/Time Collected? Yes  
Collectors name? Yes

Sample Preservation

21. Does the COC or field labels indicate the samples were preserved? No
22. Are sample(s) correctly preserved? NA
24. Is lab filtration required and/or requested for dissolved metals? No

Multiphase Sample Matrix

26. Does the sample have more than one phase, i.e., multiphase? No
27. If yes, does the COC specify which phase(s) is to be analyzed? NA

Subcontract Laboratory

28. Are samples required to get sent to a subcontract laboratory? No
29. Was a subcontract laboratory specified by the client and if so who? NA Subcontract Lab: NA

Client Instruction

Signature of client authorizing changes to the COC or sample disposition.

Date



envirotech Inc.



Report to:  
Chance Dixon



# envirotech

*Practical Solutions for a Better Tomorrow*

## Analytical Report

Vertex Resource Services Inc.

Project Name: Zeus SWD Line

Work Order: E405156

Job Number: 24015-0003

Received: 5/13/2024

Revision: 1

Report Reviewed By:

Walter Hinchman  
Laboratory Director  
5/14/24

5796 U.S. Hwy 64  
Farmington, NM 87401

Phone: (505) 632-1881  
Envirotech-inc.com



Envirotech Inc. certifies the test results meet all requirements of TNI unless noted otherwise.  
Statement of Data Authenticity: Envirotech Inc. attests the data reported has not been altered in any way.  
Partial or incomplete reproduction of this report is prohibited, unless approved by Envirotech Inc.  
Envirotech Inc. holds the Utah TNI certification NM00979 for data reported.  
Envirotech Inc. holds the Texas TNI certification T104704557 for data reported.

Date Reported: 5/14/24

Chance Dixon  
3101 Boyd Drive  
Carlsbad, NM 88220



Project Name: Zeus SWD Line  
Workorder: E405156  
Date Received: 5/13/2024 6:15:00AM

Chance Dixon,

Thank you for choosing Envirotech, Inc. as your analytical testing laboratory for the sample(s) received on, 5/13/2024 6:15:00AM, under the Project Name: Zeus SWD Line.

The analytical test results summarized in this report with the Project Name: Zeus SWD Line apply to the individual samples collected, identified and submitted bearing the project name on the enclosed chain-of-custody. Subcontracted sample analyses not conducted by Envirotech, Inc., are attached in full as issued by the subcontract laboratory.

Please review the Chain-of-Custody (COC) and Sample Receipt Checklist (SRC) for any issues regarding sample receipt temperature, containers, preservation etc. To best understand your test results, review the entire report summarizing your sample data and the associated quality control batch data.

All reported data in this analytical report were analyzed according to the referenced method(s) and are in compliance with the latest NELAC/TNI standards, unless otherwise noted. Samples or analytical quality control parameters not meeting specific QC criteria are qualified with a data flag. Data flag definitions are located in the Notes and Definitions section of this analytical report.

If you have any questions concerning this report, please feel free to contact Envirotech, Inc.

Respectfully,

**Walter Hinchman**  
Laboratory Director  
Office: 505-632-1881  
Cell: 775-287-1762  
[whinchman@envirotech-inc.com](mailto:whinchman@envirotech-inc.com)

**Raina Schwanz**  
Laboratory Administrator  
Office: 505-632-1881  
[rainaschwanz@envirotech-inc.com](mailto:rainaschwanz@envirotech-inc.com)

**Alexa Michaels**  
Sample Custody Officer  
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[labadmin@envirotech-inc.com](mailto:labadmin@envirotech-inc.com)

Field Offices:

**Southern New Mexico Area**

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Laboratory Technical Representative  
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[ljjarboe@envirotech-inc.com](mailto:ljjarboe@envirotech-inc.com)

**Michelle Golzales**  
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[mgonzales@envirotech-inc.com](mailto:mgonzales@envirotech-inc.com)

Envirotech Web Address: [www.envirotech-inc.com](http://www.envirotech-inc.com)

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Sample Summary

Vertex Resource Services Inc. 3101 Boyd Drive Carlsbad NM, 88220	Project Name: Zeus SWD Line Project Number: 24015-0003 Project Manager: Chance Dixon	Reported: 05/14/24 13:44
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Client Sample ID	Lab Sample ID	Matrix	Sampled	Received	Container
WES24 - 40	E405156-01A	Soil	05/09/24	05/13/24	Glass Jar, 2 oz.
WES24 - 41	E405156-02A	Soil	05/09/24	05/13/24	Glass Jar, 2 oz.
WES24 - 42	E405156-03A	Soil	05/09/24	05/13/24	Glass Jar, 2 oz.
WES24 - 43	E405156-04A	Soil	05/09/24	05/13/24	Glass Jar, 2 oz.



Sample Data

Vertex Resource Services Inc. 3101 Boyd Drive Carlsbad NM, 88220	Project Name: Zeus SWD Line Project Number: 24015-0003 Project Manager: Chance Dixon	Reported: 5/14/2024 1:44:53PM
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WES24 - 40  
E405156-01

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
<b>Volatile Organics by EPA 8021B</b>	mg/kg	mg/kg	Analyst: EG		Batch: 2420003	
Benzene	ND	0.0250	1	05/13/24	05/13/24	
Ethylbenzene	ND	0.0250	1	05/13/24	05/13/24	
Toluene	ND	0.0250	1	05/13/24	05/13/24	
o-Xylene	ND	0.0250	1	05/13/24	05/13/24	
p,m-Xylene	ND	0.0500	1	05/13/24	05/13/24	
Total Xylenes	ND	0.0250	1	05/13/24	05/13/24	
Surrogate: 4-Bromochlorobenzene-PID	90.4 %	70-130		05/13/24	05/13/24	
<b>Nonhalogenated Organics by EPA 8015D - GRO</b>	mg/kg	mg/kg	Analyst: EG		Batch: 2420003	
Gasoline Range Organics (C6-C10)	ND	20.0	1	05/13/24	05/13/24	
Surrogate: 1-Chloro-4-fluorobenzene-FID	95.9 %	70-130		05/13/24	05/13/24	
<b>Nonhalogenated Organics by EPA 8015D - DRO/ORO</b>	mg/kg	mg/kg	Analyst: KM		Batch: 2420001	
Diesel Range Organics (C10-C28)	ND	25.0	1	05/13/24	05/13/24	
Oil Range Organics (C28-C36)	ND	50.0	1	05/13/24	05/13/24	
Surrogate: n-Nonane	105 %	50-200		05/13/24	05/13/24	
<b>Anions by EPA 300.0/9056A</b>	mg/kg	mg/kg	Analyst: JM		Batch: 2420002	
Chloride	ND	20.0	1	05/13/24	05/13/24	



Sample Data

Vertex Resource Services Inc. 3101 Boyd Drive Carlsbad NM, 88220	Project Name: Zeus SWD Line Project Number: 24015-0003 Project Manager: Chance Dixon	Reported: 5/14/2024 1:44:53PM
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WES24 - 41  
E405156-02

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
<b>Volatile Organics by EPA 8021B</b>						
	mg/kg	mg/kg	Analyst: EG		Batch: 2420003	
Benzene	ND	0.0250	1	05/13/24	05/13/24	
Ethylbenzene	ND	0.0250	1	05/13/24	05/13/24	
Toluene	ND	0.0250	1	05/13/24	05/13/24	
o-Xylene	ND	0.0250	1	05/13/24	05/13/24	
p,m-Xylene	ND	0.0500	1	05/13/24	05/13/24	
Total Xylenes	ND	0.0250	1	05/13/24	05/13/24	
<i>Surrogate: 4-Bromochlorobenzene-PID</i>						
	90.7 %	70-130		05/13/24	05/13/24	
<b>Nonhalogenated Organics by EPA 8015D - GRO</b>						
	mg/kg	mg/kg	Analyst: EG		Batch: 2420003	
Gasoline Range Organics (C6-C10)	ND	20.0	1	05/13/24	05/13/24	
<i>Surrogate: 1-Chloro-4-fluorobenzene-FID</i>						
	95.1 %	70-130		05/13/24	05/13/24	
<b>Nonhalogenated Organics by EPA 8015D - DRO/ORO</b>						
	mg/kg	mg/kg	Analyst: KM		Batch: 2420001	
Diesel Range Organics (C10-C28)	ND	25.0	1	05/13/24	05/13/24	
Oil Range Organics (C28-C36)	ND	50.0	1	05/13/24	05/13/24	
<i>Surrogate: n-Nonane</i>						
	107 %	50-200		05/13/24	05/13/24	
<b>Anions by EPA 300.0/9056A</b>						
	mg/kg	mg/kg	Analyst: JM		Batch: 2420002	
Chloride	ND	20.0	1	05/13/24	05/13/24	





Sample Data

Vertex Resource Services Inc. 3101 Boyd Drive Carlsbad NM, 88220	Project Name: Zeus SWD Line Project Number: 24015-0003 Project Manager: Chance Dixon	Reported: 5/14/2024 1:44:53PM
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WES24 - 42  
E405156-03

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
<b>Volatile Organics by EPA 8021B</b>						
	mg/kg	mg/kg	Analyst: EG		Batch: 2420003	
Benzene	ND	0.0250	1	05/13/24	05/13/24	
Ethylbenzene	ND	0.0250	1	05/13/24	05/13/24	
Toluene	ND	0.0250	1	05/13/24	05/13/24	
o-Xylene	ND	0.0250	1	05/13/24	05/13/24	
p,m-Xylene	ND	0.0500	1	05/13/24	05/13/24	
Total Xylenes	ND	0.0250	1	05/13/24	05/13/24	
<i>Surrogate: 4-Bromochlorobenzene-PID</i>						
	91.5 %	70-130		05/13/24	05/13/24	
<b>Nonhalogenated Organics by EPA 8015D - GRO</b>						
	mg/kg	mg/kg	Analyst: EG		Batch: 2420003	
Gasoline Range Organics (C6-C10)	ND	20.0	1	05/13/24	05/13/24	
<i>Surrogate: 1-Chloro-4-fluorobenzene-FID</i>						
	96.1 %	70-130		05/13/24	05/13/24	
<b>Nonhalogenated Organics by EPA 8015D - DRO/ORO</b>						
	mg/kg	mg/kg	Analyst: KM		Batch: 2420001	
Diesel Range Organics (C10-C28)	ND	25.0	1	05/13/24	05/13/24	
Oil Range Organics (C28-C36)	ND	50.0	1	05/13/24	05/13/24	
<i>Surrogate: n-Nonane</i>						
	103 %	50-200		05/13/24	05/13/24	
<b>Anions by EPA 300.0/9056A</b>						
	mg/kg	mg/kg	Analyst: JM		Batch: 2420002	
Chloride	2700	40.0	2	05/13/24	05/13/24	



Sample Data

Vertex Resource Services Inc. 3101 Boyd Drive Carlsbad NM, 88220	Project Name: Zeus SWD Line Project Number: 24015-0003 Project Manager: Chance Dixon	Reported: 5/14/2024 1:44:53PM
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WES24 - 43  
E405156-04

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
<b>Volatile Organics by EPA 8021B</b>						
	mg/kg	mg/kg	Analyst: EG		Batch: 2420003	
Benzene	ND	0.0250	1	05/13/24	05/13/24	
Ethylbenzene	ND	0.0250	1	05/13/24	05/13/24	
Toluene	ND	0.0250	1	05/13/24	05/13/24	
o-Xylene	ND	0.0250	1	05/13/24	05/13/24	
p,m-Xylene	ND	0.0500	1	05/13/24	05/13/24	
Total Xylenes	ND	0.0250	1	05/13/24	05/13/24	
<i>Surrogate: 4-Bromochlorobenzene-PID</i>						
	90.8 %	70-130		05/13/24	05/13/24	
<b>Nonhalogenated Organics by EPA 8015D - GRO</b>						
	mg/kg	mg/kg	Analyst: EG		Batch: 2420003	
Gasoline Range Organics (C6-C10)	ND	20.0	1	05/13/24	05/13/24	
<i>Surrogate: 1-Chloro-4-fluorobenzene-FID</i>						
	95.0 %	70-130		05/13/24	05/13/24	
<b>Nonhalogenated Organics by EPA 8015D - DRO/ORO</b>						
	mg/kg	mg/kg	Analyst: KM		Batch: 2420001	
Diesel Range Organics (C10-C28)	ND	25.0	1	05/13/24	05/13/24	
Oil Range Organics (C28-C36)	ND	50.0	1	05/13/24	05/13/24	
<i>Surrogate: n-Nonane</i>						
	108 %	50-200		05/13/24	05/13/24	
<b>Anions by EPA 300.0/9056A</b>						
	mg/kg	mg/kg	Analyst: JM		Batch: 2420002	
Chloride	ND	20.0	1	05/13/24	05/13/24	



QC Summary Data

Vertex Resource Services Inc. 3101 Boyd Drive Carlsbad NM, 88220	Project Name: Zeus SWD Line Project Number: 24015-0003 Project Manager: Chance Dixon	Reported:  5/14/2024 1:44:53PM
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Volatile Organics by EPA 8021B

Analyst: EG

Analyte	Result mg/kg	Reporting Limit mg/kg	Spike Level mg/kg	Source Result mg/kg	Rec %	Rec Limits %	RPD %	RPD Limit %	Notes
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Blank (2420003-BLK1) Prepared: 05/13/24 Analyzed: 05/13/24

Benzene	ND	0.0250							
Ethylbenzene	ND	0.0250							
Toluene	ND	0.0250							
o-Xylene	ND	0.0250							
p,m-Xylene	ND	0.0500							
Total Xylenes	ND	0.0250							
Surrogate: 4-Bromochlorobenzene-PID	7.26		8.00		90.7	70-130			

LCS (2420003-BS1) Prepared: 05/13/24 Analyzed: 05/13/24

Benzene	4.98	0.0250	5.00		99.6	70-130			
Ethylbenzene	4.84	0.0250	5.00		96.9	70-130			
Toluene	4.92	0.0250	5.00		98.3	70-130			
o-Xylene	4.82	0.0250	5.00		96.3	70-130			
p,m-Xylene	9.85	0.0500	10.0		98.5	70-130			
Total Xylenes	14.7	0.0250	15.0		97.7	70-130			
Surrogate: 4-Bromochlorobenzene-PID	7.21		8.00		90.2	70-130			

Matrix Spike (2420003-MS1) Source: E405156-02 Prepared: 05/13/24 Analyzed: 05/13/24

Benzene	5.03	0.0250	5.00	ND	101	54-133			
Ethylbenzene	4.86	0.0250	5.00	ND	97.3	61-133			
Toluene	4.95	0.0250	5.00	ND	99.0	61-130			
o-Xylene	4.84	0.0250	5.00	ND	96.8	63-131			
p,m-Xylene	9.87	0.0500	10.0	ND	98.7	63-131			
Total Xylenes	14.7	0.0250	15.0	ND	98.1	63-131			
Surrogate: 4-Bromochlorobenzene-PID	7.28		8.00		91.0	70-130			

Matrix Spike Dup (2420003-MSD1) Source: E405156-02 Prepared: 05/13/24 Analyzed: 05/13/24

Benzene	5.06	0.0250	5.00	ND	101	54-133	0.645	20	
Ethylbenzene	4.91	0.0250	5.00	ND	98.2	61-133	1.01	20	
Toluene	5.00	0.0250	5.00	ND	99.9	61-130	0.871	20	
o-Xylene	4.89	0.0250	5.00	ND	97.8	63-131	0.990	20	
p,m-Xylene	9.97	0.0500	10.0	ND	99.7	63-131	0.995	20	
Total Xylenes	14.9	0.0250	15.0	ND	99.1	63-131	0.993	20	
Surrogate: 4-Bromochlorobenzene-PID	7.21		8.00		90.2	70-130			



QC Summary Data

Vertex Resource Services Inc. 3101 Boyd Drive Carlsbad NM, 88220	Project Name: Zeus SWD Line Project Number: 24015-0003 Project Manager: Chance Dixon	Reported:  5/14/2024 1:44:53PM
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Nonhalogenated Organics by EPA 8015D - GRO

Analyst: EG

Analyte	Result mg/kg	Reporting Limit mg/kg	Spike Level mg/kg	Source Result mg/kg	Rec %	Rec Limits %	RPD %	RPD Limit %	Notes
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Blank (2420003-BLK1) Prepared: 05/13/24 Analyzed: 05/13/24

Gasoline Range Organics (C6-C10)	ND	20.0							
Surrogate: 1-Chloro-4-fluorobenzene-FID	7.60		8.00		95.0	70-130			

LCS (2420003-BS2) Prepared: 05/13/24 Analyzed: 05/13/24

Gasoline Range Organics (C6-C10)	49.7	20.0	50.0		99.4	70-130			
Surrogate: 1-Chloro-4-fluorobenzene-FID	7.71		8.00		96.3	70-130			

Matrix Spike (2420003-MS2) Source: E405156-02 Prepared: 05/13/24 Analyzed: 05/13/24

Gasoline Range Organics (C6-C10)	49.7	20.0	50.0	ND	99.4	70-130			
Surrogate: 1-Chloro-4-fluorobenzene-FID	7.71		8.00		96.4	70-130			

Matrix Spike Dup (2420003-MSD2) Source: E405156-02 Prepared: 05/13/24 Analyzed: 05/13/24

Gasoline Range Organics (C6-C10)	49.4	20.0	50.0	ND	98.7	70-130	0.648	20	
Surrogate: 1-Chloro-4-fluorobenzene-FID	7.69		8.00		96.1	70-130			



QC Summary Data

Vertex Resource Services Inc. 3101 Boyd Drive Carlsbad NM, 88220	Project Name: Zeus SWD Line Project Number: 24015-0003 Project Manager: Chance Dixon	Reported:  5/14/2024 1:44:53PM
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Nonhalogenated Organics by EPA 8015D - DRO/ORO

Analyst: KM

Analyte	Result mg/kg	Reporting Limit mg/kg	Spike Level mg/kg	Source Result mg/kg	Rec %	Rec Limits %	RPD %	RPD Limit %	Notes
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<b>Blank (2420001-BLK1)</b>					Prepared: 05/13/24 Analyzed: 05/13/24				
Diesel Range Organics (C10-C28)	ND	25.0							
Oil Range Organics (C28-C36)	ND	50.0							
Surrogate: n-Nonane	56.7		50.0		113	50-200			

<b>LCS (2420001-BS1)</b>					Prepared: 05/13/24 Analyzed: 05/13/24				
Diesel Range Organics (C10-C28)	272	25.0	250		109	38-132			
Surrogate: n-Nonane	56.5		50.0		113	50-200			

<b>LCS Dup (2420001-BSD1)</b>					Prepared: 05/13/24 Analyzed: 05/13/24				
Diesel Range Organics (C10-C28)	270	25.0	250		108	38-132	0.686	20	
Surrogate: n-Nonane	56.5		50.0		113	50-200			



QC Summary Data

Vertex Resource Services Inc. 3101 Boyd Drive Carlsbad NM, 88220	Project Name: Zeus SWD Line Project Number: 24015-0003 Project Manager: Chance Dixon	Reported:  5/14/2024 1:44:53PM
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Anions by EPA 300.0/9056A

Analyst: IY

Analyte	Result mg/kg	Reporting Limit mg/kg	Spike Level mg/kg	Source Result mg/kg	Rec %	Rec Limits %	RPD %	RPD Limit %	Notes
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Blank (2420002-BLK1)					Prepared: 05/13/24 Analyzed: 05/13/24				
Chloride	ND	20.0							
LCS (2420002-BS1)					Prepared: 05/13/24 Analyzed: 05/13/24				
Chloride	250	20.0	250		99.9	90-110			
LCS Dup (2420002-BSD1)					Prepared: 05/13/24 Analyzed: 05/13/24				
Chloride	249	20.0	250		99.6	90-110	0.293	20	

QC Summary Report Comment:  
Calculations are based off of the raw (non-rounded) data. However, for reporting purposes all QC data is rounded to three significant figures.  
Therefore, hand calculated values may differ slightly.





Definitions and Notes

Vertex Resource Services Inc.	Project Name:	Zeus SWD Line	
3101 Boyd Drive	Project Number:	24015-0003	Reported:
Carlsbad NM, 88220	Project Manager:	Chance Dixon	05/14/24 13:44

- ND      Analyte NOT DETECTED at or above the reporting limit
- NR      Not Reported
- RPD      Relative Percent Difference
- DNI      Did Not Ignite
- DNR      Did not react with the addition of acid or base.
- Note (1): Methods marked with \*\* are non-accredited methods.
- Note (2): Soil data is reported on an "as received" weight basis, unless reported otherwise.



Client Information				Invoice Information				Lab Use Only				TAT				State							
Client: <u>Vertex (Taprock)</u>				Company: <u>Taprock</u>				Lab WO# <u>E 405156</u>				Job Number <u>19031-0001</u>				1D 2D 3D Std							
Project Name: <u>Zeus SWD Line</u>				Address: <u>on file</u>												NM CO UT TX							
Project Manager: <u>Chance Dixon</u>				City, State, Zip: <u>↓</u>												✓							
Address: <u>on file</u>				Phone: <u>↓</u>																			
City, State, Zip: <u>↓</u>				Email: <u>↓</u>																			
Phone: <u>525 788 1472</u>				Miscellaneous:																			
Email: <u>CDixon@Vertex.ca</u>																							
Sample Information												Analysis and Method								EPA Program			
Time Sampled	Date Sampled	Matrix	No. of Containers	Sample ID	Field	Filter	Lab Number	DRO/ORO by 8015	GRO/DRO by 8015	BTEX by 8021	VOC by 8260	Chloride 300.0	BGDOC - NM	TCEQ 1005 - TX	RCRA 8 Metals	SDWA	CWA	RCRA					
12:00	05/09/24	Soil	1	WES24-40			1	✓	✓	✓		✓											
12:05	↓	↓	1	WES24-41			2	✓	✓	✓		✓											
12:00	↓	↓	1	WES24-42			3	✓	✓	✓		✓											
12:15	↓	↓	1	WES24-43			4	✓	✓	✓		✓											
Additional Instructions: <u>Please CC: wwall@ish@vertex.ca</u>																							
I, (field sampler), attest to the validity and authenticity of this sample. I am aware that tampering with or intentionally mislabeling the sample location, date or time of collection is considered fraud and may be grounds for legal action.																							
Sampled by: <u>49att@wall@ish</u>																							
Relinquished by: (Signature) <u>[Signature]</u>				Date <u>05/10/24</u>		Time <u>9:21</u>		Received by: (Signature) <u>Michelle Gonzales</u>				Date <u>5-10-24</u>		Time <u>0921</u>		Samples requiring thermal preservation must be received on ice the day they are sampled or received packed in ice at an avg temp above 0 but less than 8C on subsequent days.  Lab Use Only Received on ice: <u>Y</u> / N  T1 _____ T2 _____ T3 _____  AVG Temp °C <u>4</u>							
Relinquished by: (Signature) <u>Michelle Gonzales</u>				Date <u>5-10-24</u>		Time <u>1638</u>		Received by: (Signature) <u>[Signature]</u>				Date <u>5-10-24</u>		Time <u>1800</u>									
Relinquished by: (Signature) <u>[Signature]</u>				Date <u>5-10-24</u>		Time <u>17400</u>		Received by: (Signature) <u>[Signature]</u>				Date <u>05/13/24</u>		Time <u>0615</u>									
Relinquished by: (Signature)				Date		Time		Received by: (Signature)				Date		Time									
Sample Matrix: S - Soil, Sd - Solid, Sg - Sludge, A - Aqueous, O - Other <u>S</u>												Container Type: g - glass, p - poly/plastic, ag - amber glass, v - VOA <u>g</u>											
Note: Samples are discarded 14 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at the client expense. The report for the analysis of the above samples is applicable only to those samples received by the laboratory with this COC. The liability of the laboratory is limited to the amount paid for on the report.																							

## Envirotech Analytical Laboratory

Printed: 5/13/2024 9:37:36AM

## Sample Receipt Checklist (SRC)

Instructions: Please take note of any NO checkmarks.

If we receive no response concerning these items within 24 hours of the date of this notice, all the samples will be analyzed as requested.

Client:	Vertex Resource Services Inc.	Date Received:	05/13/24 06:15	Work Order ID:	E405156
Phone:	(575) 748-0176	Date Logged In:	05/10/24 14:15	Logged In By:	Angelina Pineda
Email:	cdixon@vertex.ca	Due Date:	05/14/24 17:00 (1 day TAT)		

Chain of Custody (COC)

1. Does the sample ID match the COC? Yes
2. Does the number of samples per sampling site location match the COC? Yes
3. Were samples dropped off by client or carrier? Yes
4. Was the COC complete, i.e., signatures, dates/times, requested analyses? Yes
5. Were all samples received within holding time? Yes

Note: Analysis, such as pH which should be conducted in the field, i.e., 15 minute hold time, are not included in this discussion.

Carrier: CourierComments/ResolutionSample Turn Around Time (TAT)

6. Did the COC indicate standard TAT, or Expedited TAT? Yes

Sample Cooler

7. Was a sample cooler received? Yes
8. If yes, was cooler received in good condition? Yes
9. Was the sample(s) received intact, i.e., not broken? Yes
10. Were custody/security seals present? No
11. If yes, were custody/security seals intact? NA
12. Was the sample received on ice? If yes, the recorded temp is 4°C, i.e., 6°±2°C? Yes

Note: Thermal preservation is not required, if samples are received w/i 15 minutes of sampling

13. If no visible ice, record the temperature. Actual sample temperature: 4°C

Sample Container

14. Are aqueous VOC samples present? No
15. Are VOC samples collected in VOA Vials? NA
16. Is the head space less than 6-8 mm (pea sized or less)? NA
17. Was a trip blank (TB) included for VOC analyses? NA
18. Are non-VOC samples collected in the correct containers? Yes
19. Is the appropriate volume/weight or number of sample containers collected? Yes

Field Label

20. Were field sample labels filled out with the minimum information:  
Sample ID? Yes  
Date/Time Collected? Yes  
Collectors name? Yes

Sample Preservation

21. Does the COC or field labels indicate the samples were preserved? No
22. Are sample(s) correctly preserved? NA
24. Is lab filtration required and/or requested for dissolved metals? No

Multiphase Sample Matrix

26. Does the sample have more than one phase, i.e., multiphase? No
27. If yes, does the COC specify which phase(s) is to be analyzed? NA

Subcontract Laboratory

28. Are samples required to get sent to a subcontract laboratory? No
29. Was a subcontract laboratory specified by the client and if so who? NA Subcontract Lab: NA

Client Instruction

Signature of client authorizing changes to the COC or sample disposition.

Date



envirotech Inc.

Report to:  
Chance Dixon



# envirotech

*Practical Solutions for a Better Tomorrow*

## Analytical Report

Vertex Resource Services Inc.

Project Name: Zeus SWD Line

Work Order: E405180

Job Number: 24015-0001

Received: 5/15/2024

Revision: 1

Report Reviewed By:

Walter Hinchman  
Laboratory Director  
5/16/24

5796 U.S. Hwy 64  
Farmington, NM 87401

Phone: (505) 632-1881  
Envirotech-inc.com



Envirotech Inc. certifies the test results meet all requirements of TNI unless noted otherwise.  
Statement of Data Authenticity: Envirotech Inc. attests the data reported has not been altered in any way.  
Partial or incomplete reproduction of this report is prohibited, unless approved by Envirotech Inc.  
Envirotech Inc. holds the Utah TNI certification NM00979 for data reported.  
Envirotech Inc. holds the Texas TNI certification T104704557 for data reported.

Date Reported: 5/16/24

Chance Dixon  
3101 Boyd Drive  
Carlsbad, NM 88220



Project Name: Zeus SWD Line  
Workorder: E405180  
Date Received: 5/15/2024 9:00:00AM

Chance Dixon,

Thank you for choosing Envirotech, Inc. as your analytical testing laboratory for the sample(s) received on, 5/15/2024 9:00:00AM, under the Project Name: Zeus SWD Line.

The analytical test results summarized in this report with the Project Name: Zeus SWD Line apply to the individual samples collected, identified and submitted bearing the project name on the enclosed chain-of-custody. Subcontracted sample analyses not conducted by Envirotech, Inc., are attached in full as issued by the subcontract laboratory.

Please review the Chain-of-Custody (COC) and Sample Receipt Checklist (SRC) for any issues regarding sample receipt temperature, containers, preservation etc. To best understand your test results, review the entire report summarizing your sample data and the associated quality control batch data.

All reported data in this analytical report were analyzed according to the referenced method(s) and are in compliance with the latest NELAC/TNI standards, unless otherwise noted. Samples or analytical quality control parameters not meeting specific QC criteria are qualified with a data flag. Data flag definitions are located in the Notes and Definitions section of this analytical report.

If you have any questions concerning this report, please feel free to contact Envirotech, Inc.

Respectfully,

**Walter Hinchman**  
Laboratory Director  
Office: 505-632-1881  
Cell: 775-287-1762  
[whinchman@envirotech-inc.com](mailto:whinchman@envirotech-inc.com)

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**Alexa Michaels**  
Sample Custody Officer  
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[mgonzales@envirotech-inc.com](mailto:mgonzales@envirotech-inc.com)

Envirotech Web Address: [www.envirotech-inc.com](http://www.envirotech-inc.com)

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Chain of Custody etc.

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Sample Summary

Vertex Resource Services Inc. 3101 Boyd Drive Carlsbad NM, 88220	Project Name: Zeus SWD Line Project Number: 24015-0001 Project Manager: Chance Dixon	Reported: 05/16/24 15:40
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Client Sample ID	Lab Sample ID	Matrix	Sampled	Received	Container
BES24-02 4ft	E405180-01A	Soil	05/13/24	05/15/24	Glass Jar, 2 oz.
BES24-12 4ft	E405180-02A	Soil	05/13/24	05/15/24	Glass Jar, 2 oz.
BES24-13 4ft	E405180-03A	Soil	05/13/24	05/15/24	Glass Jar, 2 oz.
BES24-14 4ft	E405180-04A	Soil	05/13/24	05/15/24	Glass Jar, 2 oz.
BES24-15 4ft	E405180-05A	Soil	05/13/24	05/15/24	Glass Jar, 2 oz.
BES24-16 4ft	E405180-06A	Soil	05/13/24	05/15/24	Glass Jar, 2 oz.
BES24-17 4ft	E405180-07A	Soil	05/13/24	05/15/24	Glass Jar, 2 oz.
BES24-18 4ft	E405180-08A	Soil	05/13/24	05/15/24	Glass Jar, 2 oz.
BES24-19 4ft	E405180-09A	Soil	05/13/24	05/15/24	Glass Jar, 2 oz.
BES24-20 4ft	E405180-10A	Soil	05/13/24	05/15/24	Glass Jar, 2 oz.
BES24-21 4ft	E405180-11A	Soil	05/13/24	05/15/24	Glass Jar, 2 oz.
BES24-22 4ft	E405180-12A	Soil	05/13/24	05/15/24	Glass Jar, 2 oz.
BES24-23 4ft	E405180-13A	Soil	05/13/24	05/15/24	Glass Jar, 2 oz.
BES24-24	E405180-14A	Soil	05/13/24	05/15/24	Glass Jar, 2 oz.



Sample Data

Vertex Resource Services Inc. 3101 Boyd Drive Carlsbad NM, 88220	Project Name: Zeus SWD Line Project Number: 24015-0001 Project Manager: Chance Dixon	Reported: 5/16/2024 3:40:04PM
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BES24-02 4ft  
E405180-01

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
<b>Volatile Organics by EPA 8021B</b>	mg/kg	mg/kg	Analyst: BA		Batch: 2420092	
Benzene	ND	0.0250	1	05/15/24	05/15/24	
Ethylbenzene	ND	0.0250	1	05/15/24	05/15/24	
Toluene	ND	0.0250	1	05/15/24	05/15/24	
o-Xylene	ND	0.0250	1	05/15/24	05/15/24	
p,m-Xylene	ND	0.0500	1	05/15/24	05/15/24	
Total Xylenes	ND	0.0250	1	05/15/24	05/15/24	
Surrogate: 4-Bromochlorobenzene-PID	94.2 %	70-130		05/15/24	05/15/24	
<b>Nonhalogenated Organics by EPA 8015D - GRO</b>	mg/kg	mg/kg	Analyst: BA		Batch: 2420092	
Gasoline Range Organics (C6-C10)	ND	20.0	1	05/15/24	05/15/24	
Surrogate: 1-Chloro-4-fluorobenzene-FID	107 %	70-130		05/15/24	05/15/24	
<b>Nonhalogenated Organics by EPA 8015D - DRO/ORO</b>	mg/kg	mg/kg	Analyst: NV		Batch: 2420084	
Diesel Range Organics (C10-C28)	ND	25.0	1	05/15/24	05/15/24	
Oil Range Organics (C28-C36)	ND	50.0	1	05/15/24	05/15/24	
Surrogate: n-Nonane	111 %	50-200		05/15/24	05/15/24	
<b>Anions by EPA 300.0/9056A</b>	mg/kg	mg/kg	Analyst: IY		Batch: 2420093	
Chloride	291	20.0	1	05/15/24	05/16/24	



Sample Data

Vertex Resource Services Inc. 3101 Boyd Drive Carlsbad NM, 88220	Project Name: Zeus SWD Line Project Number: 24015-0001 Project Manager: Chance Dixon	Reported: 5/16/2024 3:40:04PM
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BES24-12 4ft  
E405180-02

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
<b>Volatile Organics by EPA 8021B</b>	mg/kg	mg/kg	Analyst: BA		Batch: 2420092	
Benzene	ND	0.0250	1	05/15/24	05/15/24	
Ethylbenzene	ND	0.0250	1	05/15/24	05/15/24	
Toluene	ND	0.0250	1	05/15/24	05/15/24	
o-Xylene	ND	0.0250	1	05/15/24	05/15/24	
p,m-Xylene	ND	0.0500	1	05/15/24	05/15/24	
Total Xylenes	ND	0.0250	1	05/15/24	05/15/24	
Surrogate: 4-Bromochlorobenzene-PID	93.9 %	70-130		05/15/24	05/15/24	
<b>Nonhalogenated Organics by EPA 8015D - GRO</b>	mg/kg	mg/kg	Analyst: BA		Batch: 2420092	
Gasoline Range Organics (C6-C10)	ND	20.0	1	05/15/24	05/15/24	
Surrogate: 1-Chloro-4-fluorobenzene-FID	108 %	70-130		05/15/24	05/15/24	
<b>Nonhalogenated Organics by EPA 8015D - DRO/ORO</b>	mg/kg	mg/kg	Analyst: NV		Batch: 2420084	
Diesel Range Organics (C10-C28)	ND	25.0	1	05/15/24	05/15/24	
Oil Range Organics (C28-C36)	ND	50.0	1	05/15/24	05/15/24	
Surrogate: n-Nonane	110 %	50-200		05/15/24	05/15/24	
<b>Anions by EPA 300.0/9056A</b>	mg/kg	mg/kg	Analyst: IY		Batch: 2420093	
Chloride	3210	40.0	2	05/15/24	05/16/24	



Sample Data

Vertex Resource Services Inc. 3101 Boyd Drive Carlsbad NM, 88220	Project Name: Zeus SWD Line Project Number: 24015-0001 Project Manager: Chance Dixon	Reported: 5/16/2024 3:40:04PM
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BES24-13 4ft  
E405180-03

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
<b>Volatile Organics by EPA 8021B</b>	mg/kg	mg/kg	Analyst: BA		Batch: 2420092	
Benzene	ND	0.0250	1	05/15/24	05/15/24	
Ethylbenzene	ND	0.0250	1	05/15/24	05/15/24	
Toluene	ND	0.0250	1	05/15/24	05/15/24	
o-Xylene	ND	0.0250	1	05/15/24	05/15/24	
p,m-Xylene	ND	0.0500	1	05/15/24	05/15/24	
Total Xylenes	ND	0.0250	1	05/15/24	05/15/24	
Surrogate: 4-Bromochlorobenzene-PID	94.0 %	70-130		05/15/24	05/15/24	
<b>Nonhalogenated Organics by EPA 8015D - GRO</b>	mg/kg	mg/kg	Analyst: BA		Batch: 2420092	
Gasoline Range Organics (C6-C10)	ND	20.0	1	05/15/24	05/15/24	
Surrogate: 1-Chloro-4-fluorobenzene-FID	107 %	70-130		05/15/24	05/15/24	
<b>Nonhalogenated Organics by EPA 8015D - DRO/ORO</b>	mg/kg	mg/kg	Analyst: NV		Batch: 2420084	
Diesel Range Organics (C10-C28)	ND	25.0	1	05/15/24	05/15/24	
Oil Range Organics (C28-C36)	ND	50.0	1	05/15/24	05/15/24	
Surrogate: n-Nonane	110 %	50-200		05/15/24	05/15/24	
<b>Anions by EPA 300.0/9056A</b>	mg/kg	mg/kg	Analyst: IY		Batch: 2420093	
Chloride	4910	100	5	05/15/24	05/16/24	



Sample Data

Vertex Resource Services Inc. 3101 Boyd Drive Carlsbad NM, 88220	Project Name: Zeus SWD Line Project Number: 24015-0001 Project Manager: Chance Dixon	Reported: 5/16/2024 3:40:04PM
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BES24-14 4ft  
E405180-04

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
<b>Volatile Organics by EPA 8021B</b>	mg/kg	mg/kg	Analyst: BA		Batch: 2420092	
Benzene	ND	0.0250	1	05/15/24	05/15/24	
Ethylbenzene	ND	0.0250	1	05/15/24	05/15/24	
Toluene	ND	0.0250	1	05/15/24	05/15/24	
o-Xylene	ND	0.0250	1	05/15/24	05/15/24	
p,m-Xylene	ND	0.0500	1	05/15/24	05/15/24	
Total Xylenes	ND	0.0250	1	05/15/24	05/15/24	
Surrogate: 4-Bromochlorobenzene-PID	93.7 %	70-130		05/15/24	05/15/24	
<b>Nonhalogenated Organics by EPA 8015D - GRO</b>	mg/kg	mg/kg	Analyst: BA		Batch: 2420092	
Gasoline Range Organics (C6-C10)	ND	20.0	1	05/15/24	05/15/24	
Surrogate: 1-Chloro-4-fluorobenzene-FID	108 %	70-130		05/15/24	05/15/24	
<b>Nonhalogenated Organics by EPA 8015D - DRO/ORO</b>	mg/kg	mg/kg	Analyst: NV		Batch: 2420084	
Diesel Range Organics (C10-C28)	ND	25.0	1	05/15/24	05/15/24	
Oil Range Organics (C28-C36)	ND	50.0	1	05/15/24	05/15/24	
Surrogate: n-Nonane	110 %	50-200		05/15/24	05/15/24	
<b>Anions by EPA 300.0/9056A</b>	mg/kg	mg/kg	Analyst: IY		Batch: 2420093	
Chloride	3520	40.0	2	05/15/24	05/16/24	





Sample Data

Vertex Resource Services Inc. 3101 Boyd Drive Carlsbad NM, 88220	Project Name: Zeus SWD Line Project Number: 24015-0001 Project Manager: Chance Dixon	Reported: 5/16/2024 3:40:04PM
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BES24-15 4ft  
E405180-05

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
<b>Volatile Organics by EPA 8021B</b>	mg/kg	mg/kg	Analyst: BA		Batch: 2420092	
Benzene	ND	0.0250	1	05/15/24	05/15/24	
Ethylbenzene	ND	0.0250	1	05/15/24	05/15/24	
Toluene	ND	0.0250	1	05/15/24	05/15/24	
o-Xylene	ND	0.0250	1	05/15/24	05/15/24	
p,m-Xylene	ND	0.0500	1	05/15/24	05/15/24	
Total Xylenes	ND	0.0250	1	05/15/24	05/15/24	
Surrogate: 4-Bromochlorobenzene-PID	93.9 %	70-130		05/15/24	05/15/24	
<b>Nonhalogenated Organics by EPA 8015D - GRO</b>	mg/kg	mg/kg	Analyst: BA		Batch: 2420092	
Gasoline Range Organics (C6-C10)	ND	20.0	1	05/15/24	05/15/24	
Surrogate: 1-Chloro-4-fluorobenzene-FID	108 %	70-130		05/15/24	05/15/24	
<b>Nonhalogenated Organics by EPA 8015D - DRO/ORO</b>	mg/kg	mg/kg	Analyst: NV		Batch: 2420084	
Diesel Range Organics (C10-C28)	ND	25.0	1	05/15/24	05/15/24	
Oil Range Organics (C28-C36)	ND	50.0	1	05/15/24	05/15/24	
Surrogate: n-Nonane	109 %	50-200		05/15/24	05/15/24	
<b>Anions by EPA 300.0/9056A</b>	mg/kg	mg/kg	Analyst: IY		Batch: 2420093	
Chloride	4420	40.0	2	05/15/24	05/16/24	



Sample Data

Vertex Resource Services Inc. 3101 Boyd Drive Carlsbad NM, 88220	Project Name: Zeus SWD Line Project Number: 24015-0001 Project Manager: Chance Dixon	Reported: 5/16/2024 3:40:04PM
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BES24-16 4ft  
E405180-06

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
<b>Volatile Organics by EPA 8021B</b>	mg/kg	mg/kg	Analyst: BA		Batch: 2420092	
Benzene	ND	0.0250	1	05/15/24	05/15/24	
Ethylbenzene	ND	0.0250	1	05/15/24	05/15/24	
Toluene	ND	0.0250	1	05/15/24	05/15/24	
o-Xylene	ND	0.0250	1	05/15/24	05/15/24	
p,m-Xylene	ND	0.0500	1	05/15/24	05/15/24	
Total Xylenes	ND	0.0250	1	05/15/24	05/15/24	
Surrogate: 4-Bromochlorobenzene-PID	93.4 %	70-130		05/15/24	05/15/24	
<b>Nonhalogenated Organics by EPA 8015D - GRO</b>	mg/kg	mg/kg	Analyst: BA		Batch: 2420092	
Gasoline Range Organics (C6-C10)	ND	20.0	1	05/15/24	05/15/24	
Surrogate: 1-Chloro-4-fluorobenzene-FID	108 %	70-130		05/15/24	05/15/24	
<b>Nonhalogenated Organics by EPA 8015D - DRO/ORO</b>	mg/kg	mg/kg	Analyst: NV		Batch: 2420084	
Diesel Range Organics (C10-C28)	ND	25.0	1	05/15/24	05/15/24	
Oil Range Organics (C28-C36)	ND	50.0	1	05/15/24	05/15/24	
Surrogate: n-Nonane	108 %	50-200		05/15/24	05/15/24	
<b>Anions by EPA 300.0/9056A</b>	mg/kg	mg/kg	Analyst: IY		Batch: 2420093	
Chloride	6330	100	5	05/15/24	05/16/24	



Sample Data

Vertex Resource Services Inc. 3101 Boyd Drive Carlsbad NM, 88220	Project Name: Zeus SWD Line Project Number: 24015-0001 Project Manager: Chance Dixon	Reported: 5/16/2024 3:40:04PM
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BES24-17 4ft  
E405180-07

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
<b>Volatile Organics by EPA 8021B</b>	mg/kg	mg/kg	Analyst: BA		Batch: 2420092	
Benzene	ND	0.0250	1	05/15/24	05/15/24	
Ethylbenzene	ND	0.0250	1	05/15/24	05/15/24	
Toluene	ND	0.0250	1	05/15/24	05/15/24	
o-Xylene	ND	0.0250	1	05/15/24	05/15/24	
p,m-Xylene	ND	0.0500	1	05/15/24	05/15/24	
Total Xylenes	ND	0.0250	1	05/15/24	05/15/24	
Surrogate: 4-Bromochlorobenzene-PID	93.5 %	70-130		05/15/24	05/15/24	
<b>Nonhalogenated Organics by EPA 8015D - GRO</b>	mg/kg	mg/kg	Analyst: BA		Batch: 2420092	
Gasoline Range Organics (C6-C10)	ND	20.0	1	05/15/24	05/15/24	
Surrogate: 1-Chloro-4-fluorobenzene-FID	109 %	70-130		05/15/24	05/15/24	
<b>Nonhalogenated Organics by EPA 8015D - DRO/ORO</b>	mg/kg	mg/kg	Analyst: NV		Batch: 2420084	
Diesel Range Organics (C10-C28)	ND	25.0	1	05/15/24	05/15/24	
Oil Range Organics (C28-C36)	ND	50.0	1	05/15/24	05/15/24	
Surrogate: n-Nonane	108 %	50-200		05/15/24	05/15/24	
<b>Anions by EPA 300.0/9056A</b>	mg/kg	mg/kg	Analyst: IY		Batch: 2420093	
Chloride	3440	40.0	2	05/15/24	05/16/24	



Sample Data

Vertex Resource Services Inc. 3101 Boyd Drive Carlsbad NM, 88220	Project Name: Zeus SWD Line Project Number: 24015-0001 Project Manager: Chance Dixon	Reported: 5/16/2024 3:40:04PM
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BES24-18 4ft  
E405180-08

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
<b>Volatile Organics by EPA 8021B</b>	mg/kg	mg/kg	Analyst: BA		Batch: 2420092	
Benzene	ND	0.0250	1	05/15/24	05/16/24	
Ethylbenzene	ND	0.0250	1	05/15/24	05/16/24	
Toluene	ND	0.0250	1	05/15/24	05/16/24	
o-Xylene	ND	0.0250	1	05/15/24	05/16/24	
p,m-Xylene	ND	0.0500	1	05/15/24	05/16/24	
Total Xylenes	ND	0.0250	1	05/15/24	05/16/24	
Surrogate: 4-Bromochlorobenzene-PID	93.5 %	70-130		05/15/24	05/16/24	
<b>Nonhalogenated Organics by EPA 8015D - GRO</b>	mg/kg	mg/kg	Analyst: BA		Batch: 2420092	
Gasoline Range Organics (C6-C10)	ND	20.0	1	05/15/24	05/16/24	
Surrogate: 1-Chloro-4-fluorobenzene-FID	108 %	70-130		05/15/24	05/16/24	
<b>Nonhalogenated Organics by EPA 8015D - DRO/ORO</b>	mg/kg	mg/kg	Analyst: NV		Batch: 2420084	
Diesel Range Organics (C10-C28)	ND	25.0	1	05/15/24	05/15/24	
Oil Range Organics (C28-C36)	ND	50.0	1	05/15/24	05/15/24	
Surrogate: n-Nonane	109 %	50-200		05/15/24	05/15/24	
<b>Anions by EPA 300.0/9056A</b>	mg/kg	mg/kg	Analyst: IY		Batch: 2420093	
Chloride	4280	40.0	2	05/15/24	05/16/24	



Sample Data

Vertex Resource Services Inc. 3101 Boyd Drive Carlsbad NM, 88220	Project Name: Zeus SWD Line Project Number: 24015-0001 Project Manager: Chance Dixon	Reported: 5/16/2024 3:40:04PM
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BES24-19 4ft  
E405180-09

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
<b>Volatile Organics by EPA 8021B</b>	mg/kg	mg/kg	Analyst: BA		Batch: 2420092	
Benzene	ND	0.0250	1	05/15/24	05/16/24	
Ethylbenzene	ND	0.0250	1	05/15/24	05/16/24	
Toluene	ND	0.0250	1	05/15/24	05/16/24	
o-Xylene	ND	0.0250	1	05/15/24	05/16/24	
p,m-Xylene	ND	0.0500	1	05/15/24	05/16/24	
Total Xylenes	ND	0.0250	1	05/15/24	05/16/24	
Surrogate: 4-Bromochlorobenzene-PID	93.7 %	70-130		05/15/24	05/16/24	
<b>Nonhalogenated Organics by EPA 8015D - GRO</b>	mg/kg	mg/kg	Analyst: BA		Batch: 2420092	
Gasoline Range Organics (C6-C10)	ND	20.0	1	05/15/24	05/16/24	
Surrogate: 1-Chloro-4-fluorobenzene-FID	106 %	70-130		05/15/24	05/16/24	
<b>Nonhalogenated Organics by EPA 8015D - DRO/ORO</b>	mg/kg	mg/kg	Analyst: NV		Batch: 2420084	
Diesel Range Organics (C10-C28)	ND	25.0	1	05/15/24	05/16/24	
Oil Range Organics (C28-C36)	ND	50.0	1	05/15/24	05/16/24	
Surrogate: n-Nonane	108 %	50-200		05/15/24	05/16/24	
<b>Anions by EPA 300.0/9056A</b>	mg/kg	mg/kg	Analyst: IY		Batch: 2420093	
Chloride	4650	40.0	2	05/15/24	05/16/24	



Sample Data

Vertex Resource Services Inc. 3101 Boyd Drive Carlsbad NM, 88220	Project Name: Zeus SWD Line Project Number: 24015-0001 Project Manager: Chance Dixon	Reported: 5/16/2024 3:40:04PM
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BES24-20 4ft  
E405180-10

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
<b>Volatile Organics by EPA 8021B</b>	mg/kg	mg/kg	Analyst: BA		Batch: 2420092	
Benzene	ND	0.0250	1	05/15/24	05/16/24	
Ethylbenzene	ND	0.0250	1	05/15/24	05/16/24	
Toluene	ND	0.0250	1	05/15/24	05/16/24	
o-Xylene	ND	0.0250	1	05/15/24	05/16/24	
p,m-Xylene	ND	0.0500	1	05/15/24	05/16/24	
Total Xylenes	ND	0.0250	1	05/15/24	05/16/24	
Surrogate: 4-Bromochlorobenzene-PID	93.7 %	70-130		05/15/24	05/16/24	
<b>Nonhalogenated Organics by EPA 8015D - GRO</b>	mg/kg	mg/kg	Analyst: BA		Batch: 2420092	
Gasoline Range Organics (C6-C10)	ND	20.0	1	05/15/24	05/16/24	
Surrogate: 1-Chloro-4-fluorobenzene-FID	107 %	70-130		05/15/24	05/16/24	
<b>Nonhalogenated Organics by EPA 8015D - DRO/ORO</b>	mg/kg	mg/kg	Analyst: NV		Batch: 2420084	
Diesel Range Organics (C10-C28)	ND	25.0	1	05/15/24	05/16/24	
Oil Range Organics (C28-C36)	ND	50.0	1	05/15/24	05/16/24	
Surrogate: n-Nonane	108 %	50-200		05/15/24	05/16/24	
<b>Anions by EPA 300.0/9056A</b>	mg/kg	mg/kg	Analyst: IY		Batch: 2420093	
Chloride	2340	40.0	2	05/15/24	05/16/24	





Sample Data

Vertex Resource Services Inc. 3101 Boyd Drive Carlsbad NM, 88220	Project Name: Zeus SWD Line Project Number: 24015-0001 Project Manager: Chance Dixon	Reported: 5/16/2024 3:40:04PM
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BES24-21 4ft  
E405180-11

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
<b>Volatile Organics by EPA 8021B</b>	mg/kg	mg/kg	Analyst: BA		Batch: 2420092	
Benzene	ND	0.0250	1	05/15/24	05/16/24	
Ethylbenzene	ND	0.0250	1	05/15/24	05/16/24	
Toluene	ND	0.0250	1	05/15/24	05/16/24	
o-Xylene	ND	0.0250	1	05/15/24	05/16/24	
p,m-Xylene	ND	0.0500	1	05/15/24	05/16/24	
Total Xylenes	ND	0.0250	1	05/15/24	05/16/24	
Surrogate: 4-Bromochlorobenzene-PID	94.3 %	70-130		05/15/24	05/16/24	
<b>Nonhalogenated Organics by EPA 8015D - GRO</b>	mg/kg	mg/kg	Analyst: BA		Batch: 2420092	
Gasoline Range Organics (C6-C10)	ND	20.0	1	05/15/24	05/16/24	
Surrogate: 1-Chloro-4-fluorobenzene-FID	108 %	70-130		05/15/24	05/16/24	
<b>Nonhalogenated Organics by EPA 8015D - DRO/ORO</b>	mg/kg	mg/kg	Analyst: NV		Batch: 2420084	
Diesel Range Organics (C10-C28)	ND	25.0	1	05/15/24	05/16/24	
Oil Range Organics (C28-C36)	ND	50.0	1	05/15/24	05/16/24	
Surrogate: n-Nonane	108 %	50-200		05/15/24	05/16/24	
<b>Anions by EPA 300.0/9056A</b>	mg/kg	mg/kg	Analyst: IY		Batch: 2420093	
Chloride	3220	40.0	2	05/15/24	05/16/24	



Sample Data

Vertex Resource Services Inc. 3101 Boyd Drive Carlsbad NM, 88220	Project Name: Zeus SWD Line Project Number: 24015-0001 Project Manager: Chance Dixon	Reported: 5/16/2024 3:40:04PM
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BES24-22 4ft  
E405180-12

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
<b>Volatile Organics by EPA 8021B</b>	mg/kg	mg/kg	Analyst: BA		Batch: 2420092	
Benzene	ND	0.0250	1	05/15/24	05/16/24	
Ethylbenzene	ND	0.0250	1	05/15/24	05/16/24	
Toluene	ND	0.0250	1	05/15/24	05/16/24	
o-Xylene	ND	0.0250	1	05/15/24	05/16/24	
p,m-Xylene	ND	0.0500	1	05/15/24	05/16/24	
Total Xylenes	ND	0.0250	1	05/15/24	05/16/24	
Surrogate: 4-Bromochlorobenzene-PID	93.6 %	70-130		05/15/24	05/16/24	
<b>Nonhalogenated Organics by EPA 8015D - GRO</b>	mg/kg	mg/kg	Analyst: BA		Batch: 2420092	
Gasoline Range Organics (C6-C10)	ND	20.0	1	05/15/24	05/16/24	
Surrogate: 1-Chloro-4-fluorobenzene-FID	107 %	70-130		05/15/24	05/16/24	
<b>Nonhalogenated Organics by EPA 8015D - DRO/ORO</b>	mg/kg	mg/kg	Analyst: NV		Batch: 2420084	
Diesel Range Organics (C10-C28)	ND	25.0	1	05/15/24	05/16/24	
Oil Range Organics (C28-C36)	ND	50.0	1	05/15/24	05/16/24	
Surrogate: n-Nonane	107 %	50-200		05/15/24	05/16/24	
<b>Anions by EPA 300.0/9056A</b>	mg/kg	mg/kg	Analyst: IY		Batch: 2420093	
Chloride	863	20.0	1	05/15/24	05/16/24	



Sample Data

Vertex Resource Services Inc. 3101 Boyd Drive Carlsbad NM, 88220	Project Name: Zeus SWD Line Project Number: 24015-0001 Project Manager: Chance Dixon	Reported: 5/16/2024 3:40:04PM
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BES24-23 4ft  
E405180-13

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
<b>Volatile Organics by EPA 8021B</b>						
	mg/kg	mg/kg	Analyst: BA		Batch: 2420092	
Benzene	ND	0.0250	1	05/15/24	05/16/24	
Ethylbenzene	ND	0.0250	1	05/15/24	05/16/24	
Toluene	ND	0.0250	1	05/15/24	05/16/24	
o-Xylene	ND	0.0250	1	05/15/24	05/16/24	
p,m-Xylene	ND	0.0500	1	05/15/24	05/16/24	
Total Xylenes	ND	0.0250	1	05/15/24	05/16/24	
<i>Surrogate: 4-Bromochlorobenzene-PID</i>						
	94.3 %	70-130		05/15/24	05/16/24	
<b>Nonhalogenated Organics by EPA 8015D - GRO</b>						
	mg/kg	mg/kg	Analyst: BA		Batch: 2420092	
Gasoline Range Organics (C6-C10)	ND	20.0	1	05/15/24	05/16/24	
<i>Surrogate: 1-Chloro-4-fluorobenzene-FID</i>						
	107 %	70-130		05/15/24	05/16/24	
<b>Nonhalogenated Organics by EPA 8015D - DRO/ORO</b>						
	mg/kg	mg/kg	Analyst: NV		Batch: 2420084	
Diesel Range Organics (C10-C28)	ND	25.0	1	05/15/24	05/16/24	
Oil Range Organics (C28-C36)	ND	50.0	1	05/15/24	05/16/24	
<i>Surrogate: n-Nonane</i>						
	109 %	50-200		05/15/24	05/16/24	
<b>Anions by EPA 300.0/9056A</b>						
	mg/kg	mg/kg	Analyst: IY		Batch: 2420093	
Chloride	1790	20.0	1	05/15/24	05/16/24	



Sample Data

Vertex Resource Services Inc. 3101 Boyd Drive Carlsbad NM, 88220	Project Name: Zeus SWD Line Project Number: 24015-0001 Project Manager: Chance Dixon	Reported: 5/16/2024 3:40:04PM
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BES24-24

E405180-14

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
<b>Volatile Organics by EPA 8021B</b>						
	mg/kg	mg/kg	Analyst: BA		Batch: 2420092	
Benzene	ND	0.0250	1	05/15/24	05/16/24	
Ethylbenzene	ND	0.0250	1	05/15/24	05/16/24	
Toluene	ND	0.0250	1	05/15/24	05/16/24	
o-Xylene	ND	0.0250	1	05/15/24	05/16/24	
p,m-Xylene	ND	0.0500	1	05/15/24	05/16/24	
Total Xylenes	ND	0.0250	1	05/15/24	05/16/24	
<i>Surrogate: 4-Bromochlorobenzene-PID</i>						
	94.2 %	70-130		05/15/24	05/16/24	
<b>Nonhalogenated Organics by EPA 8015D - GRO</b>						
	mg/kg	mg/kg	Analyst: BA		Batch: 2420092	
Gasoline Range Organics (C6-C10)	ND	20.0	1	05/15/24	05/16/24	
<i>Surrogate: 1-Chloro-4-fluorobenzene-FID</i>						
	107 %	70-130		05/15/24	05/16/24	
<b>Nonhalogenated Organics by EPA 8015D - DRO/ORO</b>						
	mg/kg	mg/kg	Analyst: NV		Batch: 2420084	
Diesel Range Organics (C10-C28)	ND	25.0	1	05/15/24	05/16/24	
Oil Range Organics (C28-C36)	ND	50.0	1	05/15/24	05/16/24	
<i>Surrogate: n-Nonane</i>						
	111 %	50-200		05/15/24	05/16/24	
<b>Anions by EPA 300.0/9056A</b>						
	mg/kg	mg/kg	Analyst: IY		Batch: 2420093	
Chloride	4150	40.0	2	05/15/24	05/16/24	



QC Summary Data

Vertex Resource Services Inc. 3101 Boyd Drive Carlsbad NM, 88220	Project Name: Zeus SWD Line Project Number: 24015-0001 Project Manager: Chance Dixon	Reported:  5/16/2024 3:40:04PM
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Volatile Organics by EPA 8021B

Analyst: BA

Analyte	Result mg/kg	Reporting Limit mg/kg	Spike Level mg/kg	Source Result mg/kg	Rec %	Rec Limits %	RPD %	RPD Limit %	Notes
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Blank (2420092-BLK1) Prepared: 05/15/24 Analyzed: 05/15/24

Benzene	ND	0.0250							
Ethylbenzene	ND	0.0250							
Toluene	ND	0.0250							
o-Xylene	ND	0.0250							
p,m-Xylene	ND	0.0500							
Total Xylenes	ND	0.0250							
Surrogate: 4-Bromochlorobenzene-PID	7.48		8.00		93.6	70-130			

LCS (2420092-BS1) Prepared: 05/15/24 Analyzed: 05/15/24

Benzene	5.09	0.0250	5.00		102	70-130			
Ethylbenzene	4.84	0.0250	5.00		96.9	70-130			
Toluene	5.05	0.0250	5.00		101	70-130			
o-Xylene	4.95	0.0250	5.00		99.0	70-130			
p,m-Xylene	9.98	0.0500	10.0		99.8	70-130			
Total Xylenes	14.9	0.0250	15.0		99.5	70-130			
Surrogate: 4-Bromochlorobenzene-PID	7.57		8.00		94.7	70-130			

Matrix Spike (2420092-MS1) Source: E405178-24 Prepared: 05/15/24 Analyzed: 05/15/24

Benzene	5.33	0.0250	5.00	ND	107	54-133			
Ethylbenzene	5.08	0.0250	5.00	ND	102	61-133			
Toluene	5.29	0.0250	5.00	ND	106	61-130			
o-Xylene	5.18	0.0250	5.00	ND	104	63-131			
p,m-Xylene	10.5	0.0500	10.0	ND	105	63-131			
Total Xylenes	15.6	0.0250	15.0	ND	104	63-131			
Surrogate: 4-Bromochlorobenzene-PID	7.47		8.00		93.3	70-130			

Matrix Spike Dup (2420092-MSD1) Source: E405178-24 Prepared: 05/15/24 Analyzed: 05/15/24

Benzene	5.35	0.0250	5.00	ND	107	54-133	0.398	20	
Ethylbenzene	5.08	0.0250	5.00	ND	102	61-133	0.106	20	
Toluene	5.30	0.0250	5.00	ND	106	61-130	0.171	20	
o-Xylene	5.20	0.0250	5.00	ND	104	63-131	0.350	20	
p,m-Xylene	10.5	0.0500	10.0	ND	105	63-131	0.103	20	
Total Xylenes	15.7	0.0250	15.0	ND	104	63-131	0.185	20	
Surrogate: 4-Bromochlorobenzene-PID	7.51		8.00		93.9	70-130			



QC Summary Data

Vertex Resource Services Inc. 3101 Boyd Drive Carlsbad NM, 88220	Project Name: Zeus SWD Line Project Number: 24015-0001 Project Manager: Chance Dixon	Reported:  5/16/2024 3:40:04PM
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Nonhalogenated Organics by EPA 8015D - GRO

Analyst: BA

Analyte	Result mg/kg	Reporting Limit mg/kg	Spike Level mg/kg	Source Result mg/kg	Rec %	Rec Limits %	RPD %	RPD Limit %	Notes
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Blank (2420092-BLK1) Prepared: 05/15/24 Analyzed: 05/15/24

Gasoline Range Organics (C6-C10)	ND	20.0							
Surrogate: 1-Chloro-4-fluorobenzene-FID	8.49		8.00		106	70-130			

LCS (2420092-BS2) Prepared: 05/15/24 Analyzed: 05/15/24

Gasoline Range Organics (C6-C10)	55.7	20.0	50.0		111	70-130			
Surrogate: 1-Chloro-4-fluorobenzene-FID	8.74		8.00		109	70-130			

Matrix Spike (2420092-MS2) Source: E405178-24 Prepared: 05/15/24 Analyzed: 05/15/24

Gasoline Range Organics (C6-C10)	56.7	20.0	50.0	ND	113	70-130			
Surrogate: 1-Chloro-4-fluorobenzene-FID	8.77		8.00		110	70-130			

Matrix Spike Dup (2420092-MSD2) Source: E405178-24 Prepared: 05/15/24 Analyzed: 05/15/24

Gasoline Range Organics (C6-C10)	57.0	20.0	50.0	ND	114	70-130	0.433	20	
Surrogate: 1-Chloro-4-fluorobenzene-FID	8.73		8.00		109	70-130			





QC Summary Data

Vertex Resource Services Inc. 3101 Boyd Drive Carlsbad NM, 88220	Project Name: Zeus SWD Line Project Number: 24015-0001 Project Manager: Chance Dixon	Reported:  5/16/2024 3:40:04PM
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Nonhalogenated Organics by EPA 8015D - DRO/ORO

Analyst: NV

Analyte	Result mg/kg	Reporting Limit mg/kg	Spike Level mg/kg	Source Result mg/kg	Rec %	Rec Limits %	RPD %	RPD Limit %	Notes
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<b>Blank (2420084-BLK1)</b>					Prepared: 05/15/24 Analyzed: 05/15/24				
Diesel Range Organics (C10-C28)	ND	25.0							
Oil Range Organics (C28-C36)	ND	50.0							
Surrogate: n-Nonane	54.7		50.0		109	50-200			

<b>LCS (2420084-BS1)</b>					Prepared: 05/15/24 Analyzed: 05/15/24				
Diesel Range Organics (C10-C28)	305	25.0	250		122	38-132			
Surrogate: n-Nonane	52.6		50.0		105	50-200			

<b>LCS Dup (2420084-BSD1)</b>					Prepared: 05/15/24 Analyzed: 05/15/24				
Diesel Range Organics (C10-C28)	305	25.0	250		122	38-132	0.100	20	
Surrogate: n-Nonane	54.6		50.0		109	50-200			



QC Summary Data

Vertex Resource Services Inc. 3101 Boyd Drive Carlsbad NM, 88220	Project Name: Zeus SWD Line Project Number: 24015-0001 Project Manager: Chance Dixon	Reported:  5/16/2024 3:40:04PM
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Anions by EPA 300.0/9056A

Analyst: IY

Analyte	Result mg/kg	Reporting Limit mg/kg	Spike Level mg/kg	Source Result mg/kg	Rec %	Rec Limits %	RPD %	RPD Limit %	Notes
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Blank (2420093-BLK1)					Prepared: 05/15/24 Analyzed: 05/16/24				
Chloride	ND	20.0							
LCS (2420093-BS1)					Prepared: 05/15/24 Analyzed: 05/16/24				
Chloride	250	20.0	250		100	90-110			
LCS Dup (2420093-BSD1)					Prepared: 05/15/24 Analyzed: 05/16/24				
Chloride	249	20.0	250		99.5	90-110	0.591	20	

QC Summary Report Comment:  
Calculations are based off of the raw (non-rounded) data. However, for reporting purposes all QC data is rounded to three significant figures.  
Therefore, hand calculated values may differ slightly.



Definitions and Notes

Vertex Resource Services Inc.	Project Name:	Zeus SWD Line	
3101 Boyd Drive	Project Number:	24015-0001	Reported:
Carlsbad NM, 88220	Project Manager:	Chance Dixon	05/16/24 15:40

- ND      Analyte NOT DETECTED at or above the reporting limit
- NR      Not Reported
- RPD      Relative Percent Difference
- DNI      Did Not Ignite
- DNR      Did not react with the addition of acid or base.
- Note (1): Methods marked with \*\* are non-accredited methods.
- Note (2): Soil data is reported on an "as received" weight basis, unless reported otherwise.



## Chain of Custody

Page 1 of 2

Client Information					Invoice Information			Lab Use Only		TAT				State			
Client: <u>VerTex Capital</u>					Company: <u>Tape Rock</u>			Lab WO#	Job Number	1D	2D	3D	Std	NM	CO	UT	TX
Project Name: <u>Zeus SWD Line</u>					Address: <u>on file</u>			<u>E405180</u>	<u>24015-0001</u>		<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>			
Project Manager: <u>Chance Dixon</u>					City, State, Zip:												
Address: <u>on file</u>					Phone:												
City, State, Zip: <u>J</u>					Email:												
Phone: <u>575 988 1472</u>					Miscellaneous:												
Email: <u>C.Dixon@vertex.ca</u>																	

Sample Information						Analysis and Method										EPA Program			
Time Sampled	Date Sampled	Matrix	No. of Containers	Sample ID	Field Filter	Lab Number	DRO/ORO by 8015	GRO/DRO by 8015	BTEX by 8021	VOC by 8260	Chloride 300.0	BGDOC - NM	TCED 1005 - TX	RCRA 8 Metals	SDWA	CWA	RCRA		
10:00	05/13/24	Soil	1	BES24-02 4ft		1	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>								
10:05				BES24-12 4ft		2													
10:10				BES24-13 4ft		3													
10:15				BES24-14 4ft		4													
10:20				BES24-15 4ft		5													
10:25				BES24-16 4ft		6													
10:30				BES24-17 4ft		7													
10:35				BES24-18 4ft		8													
10:40				BES24-19 4ft		9													
10:45				BES24-20 4ft		10	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>								

Additional Instructions: CC: W.Wadleigh@vertex.ca

I, (field sampler), attest to the validity and authenticity of this sample. I am aware that tampering with or intentionally mislabeling the sample location, date or time of collection is considered fraud and may be grounds for legal action.

Sampled by: Wadleigh

Relinquished by: (Signature) <u>W.W.</u>	Date <u>5-14-24</u>	Time <u>1145</u>	Received by: (Signature) <u>[Signature]</u>	Date <u>5-14-24</u>	Time <u>1145</u>
Relinquished by: (Signature) <u>[Signature]</u>	Date <u>5-14-24</u>	Time <u>1815</u>	Received by: (Signature) <u>[Signature]</u>	Date <u>5-14-24</u>	Time <u>1815</u>
Relinquished by: (Signature) <u>[Signature]</u>	Date <u>5-14-24</u>	Time <u>2400</u>	Received by: (Signature) <u>[Signature]</u>	Date <u>5/15/24</u>	Time <u>900</u>

Samples requiring thermal preservation must be received on ice the day they are sampled or received packed in ice at an avg temp above 0 but less than 6C on subsequent days.

Lab Use Only

Received on ice: ☒ Y ☐ N

T1 \_\_\_\_\_ T2 \_\_\_\_\_ T3 \_\_\_\_\_

AVG Temp °C 4

Sample Matrix: S Soil, Sd - Solid, Sg - Sludge, A - Aqueous, O - Other

Container Type: g glass, p - poly/plastic, ag - amber glass, v - VOA g

Note: Samples are discarded 14 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at the client expense. The report for the analysis of the above samples is applicable only to those samples received by the laboratory with this COC. The liability of the laboratory is limited to the amount paid for on the report.



# envirotech

## Chain of Custody

[illegible]

**envirotech**

## Envirotech Analytical Laboratory

Printed: 5/16/2024 12:48:32PM

## Sample Receipt Checklist (SRC)

Instructions: Please take note of any NO checkmarks.

If we receive no response concerning these items within 24 hours of the date of this notice, all the samples will be analyzed as requested.

Client:	Vertex Resource Services Inc.	Date Received:	05/15/24 09:00	Work Order ID:	E405180
Phone:	(575) 748-0176	Date Logged In:	05/14/24 17:45	Logged In By:	Alexa Michaels
Email:	cdixon@vertex.ca	Due Date:	05/16/24 17:00 (1 day TAT)		

Chain of Custody (COC)

1. Does the sample ID match the COC? Yes
2. Does the number of samples per sampling site location match the COC? Yes
3. Were samples dropped off by client or carrier? Yes
4. Was the COC complete, i.e., signatures, dates/times, requested analyses? Yes
5. Were all samples received within holding time? Yes

Note: Analysis, such as pH which should be conducted in the field, i.e., 15 minute hold time, are not included in this discussion.

Carrier: CourierComments/ResolutionSample Turn Around Time (TAT)

6. Did the COC indicate standard TAT, or Expedited TAT? Yes

Sample Cooler

7. Was a sample cooler received? Yes
8. If yes, was cooler received in good condition? Yes
9. Was the sample(s) received intact, i.e., not broken? Yes
10. Were custody/security seals present? No
11. If yes, were custody/security seals intact? NA
12. Was the sample received on ice? If yes, the recorded temp is 4°C, i.e., 6°±2°C Yes

Note: Thermal preservation is not required, if samples are received w/i 15 minutes of sampling

13. If no visible ice, record the temperature. Actual sample temperature: 4°C

Sample Container

14. Are aqueous VOC samples present? No
15. Are VOC samples collected in VOA Vials? NA
16. Is the head space less than 6-8 mm (pea sized or less)? NA
17. Was a trip blank (TB) included for VOC analyses? NA
18. Are non-VOC samples collected in the correct containers? Yes
19. Is the appropriate volume/weight or number of sample containers collected? Yes

Field Label

20. Were field sample labels filled out with the minimum information:
  - Sample ID? Yes
  - Date/Time Collected? Yes
  - Collectors name? Yes

Sample Preservation

21. Does the COC or field labels indicate the samples were preserved? No
22. Are sample(s) correctly preserved? NA
24. Is lab filtration required and/or requested for dissolved metals? No

Multiphase Sample Matrix

26. Does the sample have more than one phase, i.e., multiphase? No
27. If yes, does the COC specify which phase(s) is to be analyzed? NA

Subcontract Laboratory

28. Are samples required to get sent to a subcontract laboratory? No
29. Was a subcontract laboratory specified by the client and if so who? NA Subcontract Lab: NA

Client Instruction

Signature of client authorizing changes to the COC or sample disposition.

Date



envirotech Inc.



Report to:  
Chance Dixon



# envirotech

*Practical Solutions for a Better Tomorrow*

## Analytical Report

Vertex Resource Services Inc.

Project Name: Zeus SWD Line

Work Order: E405219

Job Number: 24015-0001

Received: 5/16/2024

Revision: 2

Report Reviewed By:

Walter Hinchman  
Laboratory Director  
5/17/24

5796 U.S. Hwy 64  
Farmington, NM 87401

Phone: (505) 632-1881  
Envirotech-inc.com



Envirotech Inc. certifies the test results meet all requirements of TNI unless noted otherwise.  
Statement of Data Authenticity: Envirotech Inc. attests the data reported has not been altered in any way.  
Partial or incomplete reproduction of this report is prohibited, unless approved by Envirotech Inc.  
Envirotech Inc. holds the Utah TNI certification NM00979 for data reported.  
Envirotech Inc. holds the Texas TNI certification T104704557 for data reported.

Date Reported: 5/17/24

Chance Dixon  
3101 Boyd Drive  
Carlsbad, NM 88220



Project Name: Zeus SWD Line  
Workorder: E405219  
Date Received: 5/16/2024 9:30:00AM

Chance Dixon,

Thank you for choosing Envirotech, Inc. as your analytical testing laboratory for the sample(s) received on, 5/16/2024 9:30:00AM, under the Project Name: Zeus SWD Line.

The analytical test results summarized in this report with the Project Name: Zeus SWD Line apply to the individual samples collected, identified and submitted bearing the project name on the enclosed chain-of-custody. Subcontracted sample analyses not conducted by Envirotech, Inc., are attached in full as issued by the subcontract laboratory.

Please review the Chain-of-Custody (COC) and Sample Receipt Checklist (SRC) for any issues regarding sample receipt temperature, containers, preservation etc. To best understand your test results, review the entire report summarizing your sample data and the associated quality control batch data.

All reported data in this analytical report were analyzed according to the referenced method(s) and are in compliance with the latest NELAC/TNI standards, unless otherwise noted. Samples or analytical quality control parameters not meeting specific QC criteria are qualified with a data flag. Data flag definitions are located in the Notes and Definitions section of this analytical report.

If you have any questions concerning this report, please feel free to contact Envirotech, Inc.

Respectfully,

**Walter Hinchman**  
Laboratory Director  
Office: 505-632-1881  
Cell: 775-287-1762  
[whinchman@envirotech-inc.com](mailto:whinchman@envirotech-inc.com)

**Raina Schwanz**  
Laboratory Administrator  
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**Alexa Michaels**  
Sample Custody Officer  
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[labadmin@envirotech-inc.com](mailto:labadmin@envirotech-inc.com)

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**Michelle Golzaes**  
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[mgonzales@envirotech-inc.com](mailto:mgonzales@envirotech-inc.com)

Envirotech Web Address: [www.envirotech-inc.com](http://www.envirotech-inc.com)

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Sample Summary

Vertex Resource Services Inc. 3101 Boyd Drive Carlsbad NM, 88220	Project Name: Zeus SWD Line Project Number: 24015-0001 Project Manager: Chance Dixon	Reported: 05/17/24 15:43
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Client Sample ID	Lab Sample ID	Matrix	Sampled	Received	Container
BES24 - 25 4FT	E405219-01A	Soil	05/14/24	05/16/24	Glass Jar, 2 oz.
BES24 - 26 4FT	E405219-02A	Soil	05/14/24	05/16/24	Glass Jar, 2 oz.
BES24 - 27 4FT	E405219-03A	Soil	05/14/24	05/16/24	Glass Jar, 2 oz.
BES24 - 28 4FT	E405219-04A	Soil	05/14/24	05/16/24	Glass Jar, 2 oz.



Sample Data

Vertex Resource Services Inc. 3101 Boyd Drive Carlsbad NM, 88220	Project Name: Zeus SWD Line Project Number: 24015-0001 Project Manager: Chance Dixon	Reported: 5/17/2024 3:43:15PM
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BES24 - 25 4FT

E405219-01

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
<b>Volatile Organic Compounds by EPA 8260B</b>						
	mg/kg	mg/kg	Analyst: EG		Batch: 2420138	
Benzene	ND	0.0250	1	05/16/24	05/16/24	
Ethylbenzene	ND	0.0250	1	05/16/24	05/16/24	
Toluene	ND	0.0250	1	05/16/24	05/16/24	
o-Xylene	ND	0.0250	1	05/16/24	05/16/24	
p,m-Xylene	ND	0.0500	1	05/16/24	05/16/24	
Total Xylenes	ND	0.0250	1	05/16/24	05/16/24	
Surrogate: Bromofluorobenzene		105 %	70-130	05/16/24	05/16/24	
Surrogate: 1,2-Dichloroethane-d4		101 %	70-130	05/16/24	05/16/24	
Surrogate: Toluene-d8		101 %	70-130	05/16/24	05/16/24	
<b>Nonhalogenated Organics by EPA 8015D - GRO</b>						
	mg/kg	mg/kg	Analyst: EG		Batch: 2420138	
Gasoline Range Organics (C6-C10)	ND	20.0	1	05/16/24	05/16/24	
Surrogate: Bromofluorobenzene		105 %	70-130	05/16/24	05/16/24	
Surrogate: 1,2-Dichloroethane-d4		101 %	70-130	05/16/24	05/16/24	
Surrogate: Toluene-d8		101 %	70-130	05/16/24	05/16/24	
<b>Nonhalogenated Organics by EPA 8015D - DRO/ORO</b>						
	mg/kg	mg/kg	Analyst: NV		Batch: 2420136	
Diesel Range Organics (C10-C28)	ND	25.0	1	05/16/24	05/17/24	
Oil Range Organics (C28-C36)	ND	50.0	1	05/16/24	05/17/24	
Surrogate: n-Nonane		108 %	50-200	05/16/24	05/17/24	
<b>Anions by EPA 300.0/9056A</b>						
	mg/kg	mg/kg	Analyst: IY		Batch: 2420152	
Chloride	1500	40.0	2	05/16/24	05/17/24	



Sample Data

Vertex Resource Services Inc. 3101 Boyd Drive Carlsbad NM, 88220	Project Name: Zeus SWD Line Project Number: 24015-0001 Project Manager: Chance Dixon	Reported: 5/17/2024 3:43:15PM
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BES24 - 26 4FT  
E405219-02

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
<b>Volatile Organic Compounds by EPA 8260B</b>						
	mg/kg	mg/kg	Analyst: EG		Batch: 2420138	
Benzene	ND	0.0250	1	05/16/24	05/16/24	
Ethylbenzene	ND	0.0250	1	05/16/24	05/16/24	
Toluene	ND	0.0250	1	05/16/24	05/16/24	
o-Xylene	ND	0.0250	1	05/16/24	05/16/24	
p,m-Xylene	ND	0.0500	1	05/16/24	05/16/24	
Total Xylenes	ND	0.0250	1	05/16/24	05/16/24	
Surrogate: Bromofluorobenzene	105 %	70-130		05/16/24	05/16/24	
Surrogate: 1,2-Dichloroethane-d4	98.6 %	70-130		05/16/24	05/16/24	
Surrogate: Toluene-d8	103 %	70-130		05/16/24	05/16/24	
<b>Nonhalogenated Organics by EPA 8015D - GRO</b>						
	mg/kg	mg/kg	Analyst: EG		Batch: 2420138	
Gasoline Range Organics (C6-C10)	ND	20.0	1	05/16/24	05/16/24	
Surrogate: Bromofluorobenzene	105 %	70-130		05/16/24	05/16/24	
Surrogate: 1,2-Dichloroethane-d4	98.6 %	70-130		05/16/24	05/16/24	
Surrogate: Toluene-d8	103 %	70-130		05/16/24	05/16/24	
<b>Nonhalogenated Organics by EPA 8015D - DRO/ORO</b>						
	mg/kg	mg/kg	Analyst: NV		Batch: 2420136	
Diesel Range Organics (C10-C28)	ND	25.0	1	05/16/24	05/17/24	
Oil Range Organics (C28-C36)	ND	50.0	1	05/16/24	05/17/24	
Surrogate: n-Nonane	105 %	50-200		05/16/24	05/17/24	
<b>Anions by EPA 300.0/9056A</b>						
	mg/kg	mg/kg	Analyst: IY		Batch: 2420152	
Chloride	4140	40.0	2	05/16/24	05/17/24	





Sample Data

Vertex Resource Services Inc. 3101 Boyd Drive Carlsbad NM, 88220	Project Name: Zeus SWD Line Project Number: 24015-0001 Project Manager: Chance Dixon	Reported: 5/17/2024 3:43:15PM
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BES24 - 27 4FT  
E405219-03

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
<b>Volatile Organic Compounds by EPA 8260B</b>						
	mg/kg	mg/kg	Analyst: EG		Batch: 2420138	
Benzene	ND	0.0250	1	05/16/24	05/16/24	
Ethylbenzene	ND	0.0250	1	05/16/24	05/16/24	
Toluene	ND	0.0250	1	05/16/24	05/16/24	
o-Xylene	ND	0.0250	1	05/16/24	05/16/24	
p,m-Xylene	ND	0.0500	1	05/16/24	05/16/24	
Total Xylenes	ND	0.0250	1	05/16/24	05/16/24	
Surrogate: Bromofluorobenzene	105 %	70-130		05/16/24	05/16/24	
Surrogate: 1,2-Dichloroethane-d4	98.9 %	70-130		05/16/24	05/16/24	
Surrogate: Toluene-d8	101 %	70-130		05/16/24	05/16/24	
<b>Nonhalogenated Organics by EPA 8015D - GRO</b>						
	mg/kg	mg/kg	Analyst: EG		Batch: 2420138	
Gasoline Range Organics (C6-C10)	ND	20.0	1	05/16/24	05/16/24	
Surrogate: Bromofluorobenzene	105 %	70-130		05/16/24	05/16/24	
Surrogate: 1,2-Dichloroethane-d4	98.9 %	70-130		05/16/24	05/16/24	
Surrogate: Toluene-d8	101 %	70-130		05/16/24	05/16/24	
<b>Nonhalogenated Organics by EPA 8015D - DRO/ORO</b>						
	mg/kg	mg/kg	Analyst: NV		Batch: 2420136	
Diesel Range Organics (C10-C28)	ND	25.0	1	05/16/24	05/17/24	
Oil Range Organics (C28-C36)	ND	50.0	1	05/16/24	05/17/24	
Surrogate: n-Nonane	107 %	50-200		05/16/24	05/17/24	
<b>Anions by EPA 300.0/9056A</b>						
	mg/kg	mg/kg	Analyst: IY		Batch: 2420152	
Chloride	3060	40.0	2	05/16/24	05/17/24	



Sample Data

Vertex Resource Services Inc. 3101 Boyd Drive Carlsbad NM, 88220	Project Name: Zeus SWD Line Project Number: 24015-0001 Project Manager: Chance Dixon	Reported: 5/17/2024 3:43:15PM
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BES24 - 28 4FT  
E405219-04

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
<b>Volatile Organic Compounds by EPA 8260B</b>						
	mg/kg	mg/kg	Analyst: EG		Batch: 2420138	
Benzene	ND	0.0250	1	05/16/24	05/16/24	
Ethylbenzene	ND	0.0250	1	05/16/24	05/16/24	
Toluene	ND	0.0250	1	05/16/24	05/16/24	
o-Xylene	ND	0.0250	1	05/16/24	05/16/24	
p,m-Xylene	ND	0.0500	1	05/16/24	05/16/24	
Total Xylenes	ND	0.0250	1	05/16/24	05/16/24	
Surrogate: Bromofluorobenzene	107 %	70-130		05/16/24	05/16/24	
Surrogate: 1,2-Dichloroethane-d4	96.8 %	70-130		05/16/24	05/16/24	
Surrogate: Toluene-d8	102 %	70-130		05/16/24	05/16/24	
<b>Nonhalogenated Organics by EPA 8015D - GRO</b>						
	mg/kg	mg/kg	Analyst: EG		Batch: 2420138	
Gasoline Range Organics (C6-C10)	ND	20.0	1	05/16/24	05/16/24	
Surrogate: Bromofluorobenzene	107 %	70-130		05/16/24	05/16/24	
Surrogate: 1,2-Dichloroethane-d4	96.8 %	70-130		05/16/24	05/16/24	
Surrogate: Toluene-d8	102 %	70-130		05/16/24	05/16/24	
<b>Nonhalogenated Organics by EPA 8015D - DRO/ORO</b>						
	mg/kg	mg/kg	Analyst: NV		Batch: 2420136	
Diesel Range Organics (C10-C28)	ND	25.0	1	05/16/24	05/17/24	
Oil Range Organics (C28-C36)	ND	50.0	1	05/16/24	05/17/24	
Surrogate: n-Nonane	108 %	50-200		05/16/24	05/17/24	
<b>Anions by EPA 300.0/9056A</b>						
	mg/kg	mg/kg	Analyst: IY		Batch: 2420152	
Chloride	2520	40.0	2	05/16/24	05/17/24	



QC Summary Data

Vertex Resource Services Inc.	Project Name:	Zeus SWD Line	Reported:
3101 Boyd Drive	Project Number:	24015-0001	
Carlsbad NM, 88220	Project Manager:	Chance Dixon	5/17/2024 3:43:15PM

Volatile Organic Compounds by EPA 8260B

Analyst: EG

Analyte	Result	Reporting Limit	Spike Level	Source Result	Rec	Rec Limits	RPD	RPD Limit	Notes
	mg/kg	mg/kg	mg/kg	mg/kg	%	%	%	%	

Blank (2420138-BLK1) Prepared: 05/16/24 Analyzed: 05/16/24

Benzene	ND	0.0250							
Ethylbenzene	ND	0.0250							
Toluene	ND	0.0250							
o-Xylene	ND	0.0250							
p,m-Xylene	ND	0.0500							
Total Xylenes	ND	0.0250							
Surrogate: Bromofluorobenzene	0.535		0.500		107	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.480		0.500		95.9	70-130			
Surrogate: Toluene-d8	0.507		0.500		101	70-130			

LCS (2420138-BS1) Prepared: 05/16/24 Analyzed: 05/16/24

Benzene	2.58	0.0250	2.50		103	70-130			
Ethylbenzene	2.70	0.0250	2.50		108	70-130			
Toluene	2.56	0.0250	2.50		103	70-130			
o-Xylene	2.77	0.0250	2.50		111	70-130			
p,m-Xylene	5.57	0.0500	5.00		111	70-130			
Total Xylenes	8.34	0.0250	7.50		111	70-130			
Surrogate: Bromofluorobenzene	0.524		0.500		105	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.473		0.500		94.6	70-130			
Surrogate: Toluene-d8	0.511		0.500		102	70-130			

LCS Dup (2420138-BSD1) Prepared: 05/16/24 Analyzed: 05/16/24

Benzene	2.60	0.0250	2.50		104	70-130	0.696	23	
Ethylbenzene	2.70	0.0250	2.50		108	70-130	0.333	27	
Toluene	2.54	0.0250	2.50		101	70-130	1.02	24	
o-Xylene	2.88	0.0250	2.50		115	70-130	3.92	27	
p,m-Xylene	5.79	0.0500	5.00		116	70-130	3.92	27	
Total Xylenes	8.68	0.0250	7.50		116	70-130	3.92	27	
Surrogate: Bromofluorobenzene	0.544		0.500		109	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.482		0.500		96.3	70-130			
Surrogate: Toluene-d8	0.516		0.500		103	70-130			



QC Summary Data

Vertex Resource Services Inc. 3101 Boyd Drive Carlsbad NM, 88220	Project Name: Zeus SWD Line Project Number: 24015-0001 Project Manager: Chance Dixon	Reported:  5/17/2024 3:43:15PM
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Nonhalogenated Organics by EPA 8015D - GRO

Analyst: EG

Analyte	Result mg/kg	Reporting Limit mg/kg	Spike Level mg/kg	Source Result mg/kg	Rec % %	Rec Limits %	RPD %	RPD Limit %	Notes
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Blank (2420138-BLK1) Prepared: 05/16/24 Analyzed: 05/16/24

Gasoline Range Organics (C6-C10)	ND	20.0							
Surrogate: Bromofluorobenzene	0.535		0.500		107	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.480		0.500		95.9	70-130			
Surrogate: Toluene-d8	0.507		0.500		101	70-130			

LCS (2420138-BS2) Prepared: 05/16/24 Analyzed: 05/16/24

Gasoline Range Organics (C6-C10)	45.2	20.0	50.0		90.5	70-130			
Surrogate: Bromofluorobenzene	0.542		0.500		108	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.475		0.500		95.0	70-130			
Surrogate: Toluene-d8	0.515		0.500		103	70-130			

LCS Dup (2420138-BSD2) Prepared: 05/16/24 Analyzed: 05/16/24

Gasoline Range Organics (C6-C10)	46.1	20.0	50.0		92.2	70-130	1.86	20	
Surrogate: Bromofluorobenzene	0.548		0.500		110	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.475		0.500		94.9	70-130			
Surrogate: Toluene-d8	0.524		0.500		105	70-130			



QC Summary Data

Vertex Resource Services Inc. 3101 Boyd Drive Carlsbad NM, 88220	Project Name: Zeus SWD Line Project Number: 24015-0001 Project Manager: Chance Dixon	Reported:  5/17/2024 3:43:15PM
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Nonhalogenated Organics by EPA 8015D - DRO/ORO

Analyst: NV

Analyte	Result mg/kg	Reporting Limit mg/kg	Spike Level mg/kg	Source Result mg/kg	Rec %	Rec Limits %	RPD %	RPD Limit %	Notes
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Blank (2420136-BLK1)					Prepared: 05/16/24 Analyzed: 05/17/24				
Diesel Range Organics (C10-C28)	ND	25.0							
Oil Range Organics (C28-C36)	ND	50.0							
Surrogate: n-Nonane	52.6		50.0		105	50-200			

LCS (2420136-BS1)					Prepared: 05/16/24 Analyzed: 05/17/24				
Diesel Range Organics (C10-C28)	315	25.0	250		126	38-132			
Surrogate: n-Nonane	55.2		50.0		110	50-200			

LCS Dup (2420136-BSD1)					Prepared: 05/16/24 Analyzed: 05/17/24				
Diesel Range Organics (C10-C28)	313	25.0	250		125	38-132	0.636	20	
Surrogate: n-Nonane	56.0		50.0		112	50-200			



QC Summary Data

Vertex Resource Services Inc. 3101 Boyd Drive Carlsbad NM, 88220	Project Name: Zeus SWD Line Project Number: 24015-0001 Project Manager: Chance Dixon	Reported:  5/17/2024 3:43:15PM
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Anions by EPA 300.0/9056A

Analyst: IY

Analyte	Result mg/kg	Reporting Limit mg/kg	Spike Level mg/kg	Source Result mg/kg	Rec %	Rec Limits %	RPD %	RPD Limit %	Notes
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Blank (2420152-BLK1)					Prepared: 05/16/24 Analyzed: 05/17/24				
Chloride	ND	20.0							
LCS (2420152-BS1)					Prepared: 05/16/24 Analyzed: 05/17/24				
Chloride	248	20.0	250		99.3	90-110			
LCS Dup (2420152-BSD1)					Prepared: 05/16/24 Analyzed: 05/17/24				
Chloride	252	20.0	250		101	90-110	1.38	20	

QC Summary Report Comment:  
Calculations are based off of the raw (non-rounded) data. However, for reporting purposes all QC data is rounded to three significant figures.  
Therefore, hand calculated values may differ slightly.





Definitions and Notes

Vertex Resource Services Inc.	Project Name:	Zeus SWD Line	
3101 Boyd Drive	Project Number:	24015-0001	Reported:
Carlsbad NM, 88220	Project Manager:	Chance Dixon	05/17/24 15:43

- ND      Analyte NOT DETECTED at or above the reporting limit
- NR      Not Reported
- RPD      Relative Percent Difference
- DNI      Did Not Ignite
- DNR      Did not react with the addition of acid or base.
- Note (1): Methods marked with \*\* are non-accredited methods.
- Note (2): Soil data is reported on an "as received" weight basis, unless reported otherwise.

## Chain of Custody

Client Information				Invoice Information				Lab Use Only				TAT				State											
Client: Vertex TapRock				Company: TapRock				Lab WO# E405219				Job Number 2405-0001				NM CO UT TX											
Project Name: PWS SLD Line				Address: on fire								1D 2D 3D Std				✓											
Project Manager: Chance Dixon				City, State, Zip: ↓																							
Address: on fire				Phone: ↓																							
City, State, Zip: ↓				Email: ↓																							
Phone: 575 988 1472				Miscellaneous:																							
Email: CDixon@Vertex.ca																											
Sample Information												Analysis and Method												EPA Program			
Time Sampled	Date Sampled	Matrix	No. of Containers	Sample ID	Field	Filter	Lab Number	DRO/ORO by 8015	GRO/DRO by 8015	BTEX by 8021	VOC by 8260	Chloride 300.0	BGDOC - NM	TCEQ 1005 - TX	RCRA 8 Metals	SDWA	CWA	RCRA									
10:00	05/14/24	S	1	BES24-25 4 FT			1	✓	✓	✓		✓															
10:05	↓	↓	↓	BES24-26 4 FT			2	↓	↓	↓		↓															
10:10	↓	↓	↓	BES24-27 4 FT			3	↓	↓	↓		↓															
10:15	↓	↓	↓	BES24-28 4 FT			4	↓	↓	↓		↓															
Additional Instructions: CC: wwa@leish@Vertex.ca												Samples requiring thermal preservation must be received on ice the day they are sampled or received packed in ice at an avg temp above 0 but less than 6C on subsequent days															
I, (field sampler), attest to the validity and authenticity of this sample. I am aware that tampering with or intentionally mislabeling the sample location, date or time of collection is considered fraud and may be grounds for legal action.												Lab Use Only															
Sampled by: Wbattwatt@leish												Received on ice: Y N															
Relinquished by: (Signature) Wbattwatt				Date 5.5.24 Time 1500				Received by: (Signature) CP				Date 5.15.24 Time 1500				T1 T2 T3											
Relinquished by: (Signature) CD				Date 5.15.24 Time 1700				Received by: (Signature) J.M.				Date 5.15.24 Time 1800				AVG Temp °C 4											
Relinquished by: (Signature) J.M.				Date 5.15.24 Time 2400				Received by: (Signature) J.M.				Date 5/16/24 Time 930															
Relinquished by: (Signature)				Date				Received by: (Signature)				Date															
Sample Matrix: S - Soil, Sd - Solid, Sg - Sludge, A - Aqueous, O - Other S												Container Type: g glass, p - poly/plastic, ag - amber glass, v - VOA g															
Note: Samples are discarded 14 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at the client expense. The report for the analysis of the above samples is applicable only to those samples received by the laboratory with this COC. The liability of the laboratory is limited to the amount paid for on the report.																											



**envirotech**

## Envirotech Analytical Laboratory

Printed: 5/16/2024 1:01:41PM

## Sample Receipt Checklist (SRC)

Instructions: Please take note of any NO checkmarks.

If we receive no response concerning these items within 24 hours of the date of this notice, all the samples will be analyzed as requested.

Client:	Vertex Resource Services Inc.	Date Received:	05/16/24 09:30	Work Order ID:	E405219
Phone:	(575) 748-0176	Date Logged In:	05/15/24 18:24	Logged In By:	Alexa Michaels
Email:	cdixon@vertex.ca	Due Date:	05/17/24 17:00 (1 day TAT)		

Chain of Custody (COC)

1. Does the sample ID match the COC? Yes
2. Does the number of samples per sampling site location match the COC? Yes
3. Were samples dropped off by client or carrier? Yes
4. Was the COC complete, i.e., signatures, dates/times, requested analyses? Yes
5. Were all samples received within holding time? Yes

Note: Analysis, such as pH which should be conducted in the field, i.e., 15 minute hold time, are not included in this discussion.

Carrier: CourierComments/ResolutionSample Turn Around Time (TAT)

6. Did the COC indicate standard TAT, or Expedited TAT? Yes

Sample Cooler

7. Was a sample cooler received? Yes
8. If yes, was cooler received in good condition? Yes
9. Was the sample(s) received intact, i.e., not broken? Yes
10. Were custody/security seals present? No
11. If yes, were custody/security seals intact? NA
12. Was the sample received on ice? If yes, the recorded temp is 4°C, i.e., 6°±2°C Yes

Note: Thermal preservation is not required, if samples are received w/i 15 minutes of sampling

13. If no visible ice, record the temperature. Actual sample temperature: 4°C

Sample Container

14. Are aqueous VOC samples present? No
15. Are VOC samples collected in VOA Vials? NA
16. Is the head space less than 6-8 mm (pea sized or less)? NA
17. Was a trip blank (TB) included for VOC analyses? NA
18. Are non-VOC samples collected in the correct containers? Yes
19. Is the appropriate volume/weight or number of sample containers collected? Yes

Field Label

20. Were field sample labels filled out with the minimum information:  
Sample ID? Yes  
Date/Time Collected? Yes  
Collectors name? Yes

Sample Preservation

21. Does the COC or field labels indicate the samples were preserved? No
22. Are sample(s) correctly preserved? NA
24. Is lab filtration required and/or requested for dissolved metals? No

Multiphase Sample Matrix

26. Does the sample have more than one phase, i.e., multiphase? No
27. If yes, does the COC specify which phase(s) is to be analyzed? NA

Subcontract Laboratory

28. Are samples required to get sent to a subcontract laboratory? No
29. Was a subcontract laboratory specified by the client and if so who? NA Subcontract Lab: NA

Client Instruction

Signature of client authorizing changes to the COC or sample disposition.

Date



envirotech Inc.

Report to:  
Chance Dixon



# envirotech

*Practical Solutions for a Better Tomorrow*

## Analytical Report

Vertex Resource Services Inc.

Project Name: Zeus SWD Line

Work Order: E405218

Job Number: 24015-0001

Received: 5/16/2024

Revision: 2

Report Reviewed By:

Walter Hinchman  
Laboratory Director  
5/17/24

5796 U.S. Hwy 64  
Farmington, NM 87401

Phone: (505) 632-1881  
Envirotech-inc.com



Envirotech Inc. certifies the test results meet all requirements of TNI unless noted otherwise.  
Statement of Data Authenticity: Envirotech Inc. attests the data reported has not been altered in any way.  
Partial or incomplete reproduction of this report is prohibited, unless approved by Envirotech Inc.  
Envirotech Inc. holds the Utah TNI certification NM00979 for data reported.  
Envirotech Inc. holds the Texas TNI certification T104704557 for data reported.

Date Reported: 5/17/24

Chance Dixon  
3101 Boyd Drive  
Carlsbad, NM 88220



Project Name: Zeus SWD Line  
Workorder: E405218  
Date Received: 5/16/2024 9:30:00AM

Chance Dixon,

Thank you for choosing Envirotech, Inc. as your analytical testing laboratory for the sample(s) received on, 5/16/2024 9:30:00AM, under the Project Name: Zeus SWD Line.

The analytical test results summarized in this report with the Project Name: Zeus SWD Line apply to the individual samples collected, identified and submitted bearing the project name on the enclosed chain-of-custody. Subcontracted sample analyses not conducted by Envirotech, Inc., are attached in full as issued by the subcontract laboratory.

Please review the Chain-of-Custody (COC) and Sample Receipt Checklist (SRC) for any issues regarding sample receipt temperature, containers, preservation etc. To best understand your test results, review the entire report summarizing your sample data and the associated quality control batch data.

All reported data in this analytical report were analyzed according to the referenced method(s) and are in compliance with the latest NELAC/TNI standards, unless otherwise noted. Samples or analytical quality control parameters not meeting specific QC criteria are qualified with a data flag. Data flag definitions are located in the Notes and Definitions section of this analytical report.

If you have any questions concerning this report, please feel free to contact Envirotech, Inc.

Respectfully,

**Walter Hinchman**  
Laboratory Director  
Office: 505-632-1881  
Cell: 775-287-1762  
[whinchman@envirotech-inc.com](mailto:whinchman@envirotech-inc.com)

**Raina Schwanz**  
Laboratory Administrator  
Office: 505-632-1881  
[rainaschwanz@envirotech-inc.com](mailto:rainaschwanz@envirotech-inc.com)

**Alexa Michaels**  
Sample Custody Officer  
Office: 505-632-1881  
[labadmin@envirotech-inc.com](mailto:labadmin@envirotech-inc.com)

Field Offices:

**Southern New Mexico Area**

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[ljjarboe@envirotech-inc.com](mailto:ljjarboe@envirotech-inc.com)

**Michelle Golzaes**  
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[mgonzales@envirotech-inc.com](mailto:mgonzales@envirotech-inc.com)

Envirotech Web Address: [www.envirotech-inc.com](http://www.envirotech-inc.com)

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Sample Summary

Vertex Resource Services Inc. 3101 Boyd Drive Carlsbad NM, 88220	Project Name: Zeus SWD Line Project Number: 24015-0001 Project Manager: Chance Dixon	Reported: 05/17/24 15:44
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Client Sample ID	Lab Sample ID	Matrix	Sampled	Received	Container
WES24 - 53 4FT	E405218-01A	Soil	05/15/24	05/16/24	Glass Jar, 2 oz.
WES24 - 54 4FT	E405218-02A	Soil	05/15/24	05/16/24	Glass Jar, 2 oz.
WES24 - 55 4FT	E405218-03A	Soil	05/15/24	05/16/24	Glass Jar, 2 oz.
WES24 - 56 4FT	E405218-04A	Soil	05/15/24	05/16/24	Glass Jar, 2 oz.



Sample Data

Vertex Resource Services Inc. 3101 Boyd Drive Carlsbad NM, 88220	Project Name: Zeus SWD Line Project Number: 24015-0001 Project Manager: Chance Dixon	Reported: 5/17/2024 3:44:44PM
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WES24 - 53 4FT  
E405218-01

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
<b>Volatile Organic Compounds by EPA 8260B</b>	mg/kg	mg/kg	Analyst: EG		Batch: 2420138	
Benzene	ND	0.0250	1	05/16/24	05/16/24	
Ethylbenzene	ND	0.0250	1	05/16/24	05/16/24	
Toluene	ND	0.0250	1	05/16/24	05/16/24	
o-Xylene	ND	0.0250	1	05/16/24	05/16/24	
p,m-Xylene	ND	0.0500	1	05/16/24	05/16/24	
Total Xylenes	ND	0.0250	1	05/16/24	05/16/24	
Surrogate: Bromofluorobenzene		105 %	70-130	05/16/24	05/16/24	
Surrogate: 1,2-Dichloroethane-d4		91.9 %	70-130	05/16/24	05/16/24	
Surrogate: Toluene-d8		103 %	70-130	05/16/24	05/16/24	
<b>Nonhalogenated Organics by EPA 8015D - GRO</b>	mg/kg	mg/kg	Analyst: EG		Batch: 2420138	
Gasoline Range Organics (C6-C10)	ND	20.0	1	05/16/24	05/16/24	
Surrogate: Bromofluorobenzene		105 %	70-130	05/16/24	05/16/24	
Surrogate: 1,2-Dichloroethane-d4		91.9 %	70-130	05/16/24	05/16/24	
Surrogate: Toluene-d8		103 %	70-130	05/16/24	05/16/24	
<b>Nonhalogenated Organics by EPA 8015D - DRO/ORO</b>	mg/kg	mg/kg	Analyst: NV		Batch: 2420136	
Diesel Range Organics (C10-C28)	ND	25.0	1	05/16/24	05/17/24	
Oil Range Organics (C28-C36)	ND	50.0	1	05/16/24	05/17/24	
Surrogate: n-Nonane		99.8 %	50-200	05/16/24	05/17/24	
<b>Anions by EPA 300.0/9056A</b>	mg/kg	mg/kg	Analyst: DT		Batch: 2420151	
Chloride	86.2	20.0	1	05/16/24	05/17/24	

## Sample Data

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

Project Name: Zeus SWD Line  
Project Number: 24015-0001  
Project Manager: Chance Dixon

**Reported:**  
5/17/2024 3:44:44PM

## WES24 - 54 4FT

## E405218-02

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
<b>Volatile Organic Compounds by EPA 8260B</b>						
	mg/kg	mg/kg		Analyst: EG		Batch: 2420138
Benzene	ND	0.0250	1	05/16/24	05/16/24	
Ethylbenzene	ND	0.0250	1	05/16/24	05/16/24	
Toluene	ND	0.0250	1	05/16/24	05/16/24	
o-Xylene	ND	0.0250	1	05/16/24	05/16/24	
p,m-Xylene	ND	0.0500	1	05/16/24	05/16/24	
Total Xylenes	ND	0.0250	1	05/16/24	05/16/24	
Surrogate: Bromofluorobenzene		109 %	70-130	05/16/24	05/16/24	
Surrogate: 1,2-Dichloroethane-d4		98.5 %	70-130	05/16/24	05/16/24	
Surrogate: Toluene-d8		102 %	70-130	05/16/24	05/16/24	
<b>Nonhalogenated Organics by EPA 8015D - GRO</b>						
	mg/kg	mg/kg		Analyst: EG		Batch: 2420138
Gasoline Range Organics (C6-C10)	ND	20.0	1	05/16/24	05/16/24	
Surrogate: Bromofluorobenzene		109 %	70-130	05/16/24	05/16/24	
Surrogate: 1,2-Dichloroethane-d4		98.5 %	70-130	05/16/24	05/16/24	
Surrogate: Toluene-d8		102 %	70-130	05/16/24	05/16/24	
<b>Nonhalogenated Organics by EPA 8015D - DRO/ORO</b>						
	mg/kg	mg/kg		Analyst: NV		Batch: 2420136
Diesel Range Organics (C10-C28)	ND	25.0	1	05/16/24	05/17/24	
Oil Range Organics (C28-C36)	ND	50.0	1	05/16/24	05/17/24	
Surrogate: n-Nonane		95.5 %	50-200	05/16/24	05/17/24	
<b>Anions by EPA 300.0/9056A</b>						
	mg/kg	mg/kg		Analyst: DT		Batch: 2420151
Chloride	44.8	20.0	1	05/16/24	05/17/24	



Sample Data

Vertex Resource Services Inc. 3101 Boyd Drive Carlsbad NM, 88220	Project Name: Zeus SWD Line Project Number: 24015-0001 Project Manager: Chance Dixon	Reported: 5/17/2024 3:44:44PM
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WES24 - 55 4FT  
E405218-03

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
<b>Volatile Organic Compounds by EPA 8260B</b>						
	mg/kg	mg/kg	Analyst: EG		Batch: 2420138	
Benzene	ND	0.0250	1	05/16/24	05/16/24	
Ethylbenzene	ND	0.0250	1	05/16/24	05/16/24	
Toluene	ND	0.0250	1	05/16/24	05/16/24	
o-Xylene	ND	0.0250	1	05/16/24	05/16/24	
p,m-Xylene	ND	0.0500	1	05/16/24	05/16/24	
Total Xylenes	ND	0.0250	1	05/16/24	05/16/24	
Surrogate: Bromofluorobenzene	109 %	70-130		05/16/24	05/16/24	
Surrogate: 1,2-Dichloroethane-d4	96.5 %	70-130		05/16/24	05/16/24	
Surrogate: Toluene-d8	102 %	70-130		05/16/24	05/16/24	
<b>Nonhalogenated Organics by EPA 8015D - GRO</b>						
	mg/kg	mg/kg	Analyst: EG		Batch: 2420138	
Gasoline Range Organics (C6-C10)	ND	20.0	1	05/16/24	05/16/24	
Surrogate: Bromofluorobenzene	109 %	70-130		05/16/24	05/16/24	
Surrogate: 1,2-Dichloroethane-d4	96.5 %	70-130		05/16/24	05/16/24	
Surrogate: Toluene-d8	102 %	70-130		05/16/24	05/16/24	
<b>Nonhalogenated Organics by EPA 8015D - DRO/ORO</b>						
	mg/kg	mg/kg	Analyst: NV		Batch: 2420136	
Diesel Range Organics (C10-C28)	ND	25.0	1	05/16/24	05/17/24	
Oil Range Organics (C28-C36)	ND	50.0	1	05/16/24	05/17/24	
Surrogate: n-Nonane	95.8 %	50-200		05/16/24	05/17/24	
<b>Anions by EPA 300.0/9056A</b>						
	mg/kg	mg/kg	Analyst: DT		Batch: 2420151	
Chloride	231	20.0	1	05/16/24	05/17/24	



Sample Data

Vertex Resource Services Inc. 3101 Boyd Drive Carlsbad NM, 88220	Project Name: Zeus SWD Line Project Number: 24015-0001 Project Manager: Chance Dixon	Reported: 5/17/2024 3:44:44PM
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WES24 - 56 4FT  
E405218-04

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
<b>Volatile Organic Compounds by EPA 8260B</b>						
	mg/kg	mg/kg	Analyst: EG		Batch: 2420138	
Benzene	ND	0.0250	1	05/16/24	05/16/24	
Ethylbenzene	ND	0.0250	1	05/16/24	05/16/24	
Toluene	ND	0.0250	1	05/16/24	05/16/24	
o-Xylene	ND	0.0250	1	05/16/24	05/16/24	
p,m-Xylene	ND	0.0500	1	05/16/24	05/16/24	
Total Xylenes	ND	0.0250	1	05/16/24	05/16/24	
Surrogate: Bromofluorobenzene		106 %	70-130	05/16/24	05/16/24	
Surrogate: 1,2-Dichloroethane-d4		93.8 %	70-130	05/16/24	05/16/24	
Surrogate: Toluene-d8		102 %	70-130	05/16/24	05/16/24	
<b>Nonhalogenated Organics by EPA 8015D - GRO</b>						
	mg/kg	mg/kg	Analyst: EG		Batch: 2420138	
Gasoline Range Organics (C6-C10)	ND	20.0	1	05/16/24	05/16/24	
Surrogate: Bromofluorobenzene		106 %	70-130	05/16/24	05/16/24	
Surrogate: 1,2-Dichloroethane-d4		93.8 %	70-130	05/16/24	05/16/24	
Surrogate: Toluene-d8		102 %	70-130	05/16/24	05/16/24	
<b>Nonhalogenated Organics by EPA 8015D - DRO/ORO</b>						
	mg/kg	mg/kg	Analyst: NV		Batch: 2420136	
Diesel Range Organics (C10-C28)	ND	25.0	1	05/16/24	05/17/24	
Oil Range Organics (C28-C36)	ND	50.0	1	05/16/24	05/17/24	
Surrogate: n-Nonane		110 %	50-200	05/16/24	05/17/24	
<b>Anions by EPA 300.0/9056A</b>						
	mg/kg	mg/kg	Analyst: DT		Batch: 2420151	
Chloride	205	20.0	1	05/16/24	05/17/24	



QC Summary Data

Vertex Resource Services Inc. 3101 Boyd Drive Carlsbad NM, 88220	Project Name: Zeus SWD Line Project Number: 24015-0001 Project Manager: Chance Dixon	Reported:  5/17/2024 3:44:44PM
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Volatile Organic Compounds by EPA 8260B

Analyst: EG

Analyte	Result mg/kg	Reporting Limit mg/kg	Spike Level mg/kg	Source Result mg/kg	Rec %	Rec Limits %	RPD %	RPD Limit %	Notes
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Blank (2420138-BLK1) Prepared: 05/16/24 Analyzed: 05/16/24

Benzene	ND	0.0250							
Ethylbenzene	ND	0.0250							
Toluene	ND	0.0250							
o-Xylene	ND	0.0250							
p,m-Xylene	ND	0.0500							
Total Xylenes	ND	0.0250							
Surrogate: Bromofluorobenzene	0.535		0.500		107	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.480		0.500		95.9	70-130			
Surrogate: Toluene-d8	0.507		0.500		101	70-130			

LCS (2420138-BS1) Prepared: 05/16/24 Analyzed: 05/16/24

Benzene	2.58	0.0250	2.50		103	70-130			
Ethylbenzene	2.70	0.0250	2.50		108	70-130			
Toluene	2.56	0.0250	2.50		103	70-130			
o-Xylene	2.77	0.0250	2.50		111	70-130			
p,m-Xylene	5.57	0.0500	5.00		111	70-130			
Total Xylenes	8.34	0.0250	7.50		111	70-130			
Surrogate: Bromofluorobenzene	0.524		0.500		105	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.473		0.500		94.6	70-130			
Surrogate: Toluene-d8	0.511		0.500		102	70-130			

LCS Dup (2420138-BSD1) Prepared: 05/16/24 Analyzed: 05/16/24

Benzene	2.60	0.0250	2.50		104	70-130	0.696	23	
Ethylbenzene	2.70	0.0250	2.50		108	70-130	0.333	27	
Toluene	2.54	0.0250	2.50		101	70-130	1.02	24	
o-Xylene	2.88	0.0250	2.50		115	70-130	3.92	27	
p,m-Xylene	5.79	0.0500	5.00		116	70-130	3.92	27	
Total Xylenes	8.68	0.0250	7.50		116	70-130	3.92	27	
Surrogate: Bromofluorobenzene	0.544		0.500		109	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.482		0.500		96.3	70-130			
Surrogate: Toluene-d8	0.516		0.500		103	70-130			





QC Summary Data

Vertex Resource Services Inc. 3101 Boyd Drive Carlsbad NM, 88220	Project Name: Zeus SWD Line Project Number: 24015-0001 Project Manager: Chance Dixon	Reported:  5/17/2024 3:44:44PM
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Nonhalogenated Organics by EPA 8015D - GRO

Analyst: EG

Analyte	Result mg/kg	Reporting Limit mg/kg	Spike Level mg/kg	Source Result mg/kg	Rec % %	Rec Limits %	RPD %	RPD Limit %	Notes
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Blank (2420138-BLK1) Prepared: 05/16/24 Analyzed: 05/16/24

Gasoline Range Organics (C6-C10)	ND	20.0							
Surrogate: Bromofluorobenzene	0.535		0.500		107	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.480		0.500		95.9	70-130			
Surrogate: Toluene-d8	0.507		0.500		101	70-130			

LCS (2420138-BS2) Prepared: 05/16/24 Analyzed: 05/16/24

Gasoline Range Organics (C6-C10)	45.2	20.0	50.0		90.5	70-130			
Surrogate: Bromofluorobenzene	0.542		0.500		108	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.475		0.500		95.0	70-130			
Surrogate: Toluene-d8	0.515		0.500		103	70-130			

LCS Dup (2420138-BSD2) Prepared: 05/16/24 Analyzed: 05/16/24

Gasoline Range Organics (C6-C10)	46.1	20.0	50.0		92.2	70-130	1.86	20	
Surrogate: Bromofluorobenzene	0.548		0.500		110	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.475		0.500		94.9	70-130			
Surrogate: Toluene-d8	0.524		0.500		105	70-130			



QC Summary Data

Vertex Resource Services Inc. 3101 Boyd Drive Carlsbad NM, 88220	Project Name: Zeus SWD Line Project Number: 24015-0001 Project Manager: Chance Dixon	Reported:  5/17/2024 3:44:44PM
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Nonhalogenated Organics by EPA 8015D - DRO/ORO

Analyst: NV

Analyte	Result mg/kg	Reporting Limit mg/kg	Spike Level mg/kg	Source Result mg/kg	Rec %	Rec Limits %	RPD %	RPD Limit %	Notes
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Blank (2420136-BLK1) Prepared: 05/16/24 Analyzed: 05/17/24

Diesel Range Organics (C10-C28)	ND	25.0							
Oil Range Organics (C28-C36)	ND	50.0							
Surrogate: n-Nonane	52.6		50.0		105	50-200			

LCS (2420136-BS1) Prepared: 05/16/24 Analyzed: 05/17/24

Diesel Range Organics (C10-C28)	315	25.0	250		126	38-132			
Surrogate: n-Nonane	55.2		50.0		110	50-200			

LCS Dup (2420136-BSD1) Prepared: 05/16/24 Analyzed: 05/17/24

Diesel Range Organics (C10-C28)	313	25.0	250		125	38-132	0.636	20	
Surrogate: n-Nonane	56.0		50.0		112	50-200			



QC Summary Data

Vertex Resource Services Inc. 3101 Boyd Drive Carlsbad NM, 88220	Project Name: Zeus SWD Line Project Number: 24015-0001 Project Manager: Chance Dixon	Reported:  5/17/2024 3:44:44PM
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Anions by EPA 300.0/9056A

Analyst: DT

Analyte	Result mg/kg	Reporting Limit mg/kg	Spike Level mg/kg	Source Result mg/kg	Rec %	Rec Limits %	RPD %	RPD Limit %	Notes
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Blank (2420151-BLK1)					Prepared: 05/16/24 Analyzed: 05/17/24				
Chloride	ND	20.0							
LCS (2420151-BS1)					Prepared: 05/16/24 Analyzed: 05/17/24				
Chloride	248	20.0	250		99.3	90-110			
LCS Dup (2420151-BSD1)					Prepared: 05/16/24 Analyzed: 05/17/24				
Chloride	249	20.0	250		99.7	90-110	0.351	20	

QC Summary Report Comment:  
Calculations are based off of the raw (non-rounded) data. However, for reporting purposes all QC data is rounded to three significant figures.  
Therefore, hand calculated values may differ slightly.



Definitions and Notes

Vertex Resource Services Inc.	Project Name:	Zeus SWD Line	
3101 Boyd Drive	Project Number:	24015-0001	Reported:
Carlsbad NM, 88220	Project Manager:	Chance Dixon	05/17/24 15:44

- ND      Analyte NOT DETECTED at or above the reporting limit
- NR      Not Reported
- RPD      Relative Percent Difference
- DNI      Did Not Ignite
- DNR      Did not react with the addition of acid or base.
- Note (1): Methods marked with \*\* are non-accredited methods.
- Note (2): Soil data is reported on an "as received" weight basis, unless reported otherwise.





## Envirotech Analytical Laboratory

Printed: 5/16/2024 1:02:51PM

## Sample Receipt Checklist (SRC)

Instructions: Please take note of any NO checkmarks.

If we receive no response concerning these items within 24 hours of the date of this notice, all the samples will be analyzed as requested.

Client:	Vertex Resource Services Inc.	Date Received:	05/16/24 09:30	Work Order ID:	E405218
Phone:	(575) 748-0176	Date Logged In:	05/15/24 18:21	Logged In By:	Alexa Michaels
Email:	cdixon@vertex.ca	Due Date:	05/17/24 17:00 (1 day TAT)		

Chain of Custody (COC)

1. Does the sample ID match the COC? Yes
2. Does the number of samples per sampling site location match the COC? Yes
3. Were samples dropped off by client or carrier? Yes
4. Was the COC complete, i.e., signatures, dates/times, requested analyses? Yes
5. Were all samples received within holding time? Yes

Note: Analysis, such as pH which should be conducted in the field, i.e., 15 minute hold time, are not included in this discussion.

Carrier: CourierComments/ResolutionSample Turn Around Time (TAT)

6. Did the COC indicate standard TAT, or Expedited TAT? Yes

Sample Cooler

7. Was a sample cooler received? Yes
8. If yes, was cooler received in good condition? Yes
9. Was the sample(s) received intact, i.e., not broken? Yes
10. Were custody/security seals present? No
11. If yes, were custody/security seals intact? NA
12. Was the sample received on ice? If yes, the recorded temp is 4°C, i.e., 6°±2°C Yes

Note: Thermal preservation is not required, if samples are received w/i 15 minutes of sampling

13. If no visible ice, record the temperature. Actual sample temperature: 4°C

Sample Container

14. Are aqueous VOC samples present? No
15. Are VOC samples collected in VOA Vials? NA
16. Is the head space less than 6-8 mm (pea sized or less)? NA
17. Was a trip blank (TB) included for VOC analyses? NA
18. Are non-VOC samples collected in the correct containers? Yes
19. Is the appropriate volume/weight or number of sample containers collected? Yes

Field Label

20. Were field sample labels filled out with the minimum information:
  - Sample ID? Yes
  - Date/Time Collected? Yes
  - Collectors name? Yes

Sample Preservation

21. Does the COC or field labels indicate the samples were preserved? No
22. Are sample(s) correctly preserved? NA
24. Is lab filtration required and/or requested for dissolved metals? No

Multiphase Sample Matrix

26. Does the sample have more than one phase, i.e., multiphase? No
27. If yes, does the COC specify which phase(s) is to be analyzed? NA

Subcontract Laboratory

28. Are samples required to get sent to a subcontract laboratory? No
29. Was a subcontract laboratory specified by the client and if so who? NA Subcontract Lab: na

Client Instruction

Signature of client authorizing changes to the COC or sample disposition.

Date



envirotech Inc.



Report to:  
Chance Dixon



# envirotech

*Practical Solutions for a Better Tomorrow*

## Analytical Report

Vertex Resource Services Inc.

Project Name: Zeus SWD Line

Work Order: E405276

Job Number: 24015-0001

Received: 5/21/2024

Revision: 1

Report Reviewed By:

Walter Hinchman  
Laboratory Director  
5/25/24

5796 U.S. Hwy 64  
Farmington, NM 87401

Phone: (505) 632-1881  
Envirotech-inc.com



Envirotech Inc. certifies the test results meet all requirements of TNI unless noted otherwise.  
Statement of Data Authenticity: Envirotech Inc. attests the data reported has not been altered in any way.  
Partial or incomplete reproduction of this report is prohibited, unless approved by Envirotech Inc.  
Envirotech Inc. holds the Utah TNI certification NM00979 for data reported.  
Envirotech Inc. holds the Texas TNI certification T104704557 for data reported.



Date Reported: 5/25/24

Chance Dixon  
3101 Boyd Drive  
Carlsbad, NM 88220



Project Name: Zeus SWD Line  
Workorder: E405276  
Date Received: 5/21/2024 8:00:00AM

Chance Dixon,

Thank you for choosing Envirotech, Inc. as your analytical testing laboratory for the sample(s) received on, 5/21/2024 8:00:00AM, under the Project Name: Zeus SWD Line.

The analytical test results summarized in this report with the Project Name: Zeus SWD Line apply to the individual samples collected, identified and submitted bearing the project name on the enclosed chain-of-custody. Subcontracted sample analyses not conducted by Envirotech, Inc., are attached in full as issued by the subcontract laboratory.

Please review the Chain-of-Custody (COC) and Sample Receipt Checklist (SRC) for any issues regarding sample receipt temperature, containers, preservation etc. To best understand your test results, review the entire report summarizing your sample data and the associated quality control batch data.

All reported data in this analytical report were analyzed according to the referenced method(s) and are in compliance with the latest NELAC/TNI standards, unless otherwise noted. Samples or analytical quality control parameters not meeting specific QC criteria are qualified with a data flag. Data flag definitions are located in the Notes and Definitions section of this analytical report.

If you have any questions concerning this report, please feel free to contact Envirotech, Inc.

Respectfully,

**Walter Hinchman**  
Laboratory Director  
Office: 505-632-1881  
Cell: 775-287-1762  
[whinchman@envirotech-inc.com](mailto:whinchman@envirotech-inc.com)

**Raina Schwanz**  
Laboratory Administrator  
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**Alexa Michaels**  
Sample Custody Officer  
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[labadmin@envirotech-inc.com](mailto:labadmin@envirotech-inc.com)

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Envirotech Web Address: [www.envirotech-inc.com](http://www.envirotech-inc.com)

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Sample Summary

Vertex Resource Services Inc.	Project Name:	Zeus SWD Line	Reported:
3101 Boyd Drive	Project Number:	24015-0001	
Carlsbad NM, 88220	Project Manager:	Chance Dixon	05/25/24 09:05

Client Sample ID	Lab Sample ID	Matrix	Sampled	Received	Container
WES24-57	E405276-01A	Soil	05/20/24	05/21/24	Glass Jar, 2 oz.



Sample Data

Vertex Resource Services Inc. 3101 Boyd Drive Carlsbad NM, 88220	Project Name: Zeus SWD Line Project Number: 24015-0001 Project Manager: Chance Dixon	Reported: 5/25/2024 9:05:25AM
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WES24-57  
E405276-01

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
<b>Volatile Organics by EPA 8021B</b>	mg/kg	mg/kg	Analyst: RKS		Batch: 2421055	
Benzene	ND	0.0250	1	05/21/24	05/22/24	
Ethylbenzene	ND	0.0250	1	05/21/24	05/22/24	
Toluene	ND	0.0250	1	05/21/24	05/22/24	
o-Xylene	ND	0.0250	1	05/21/24	05/22/24	
p,m-Xylene	ND	0.0500	1	05/21/24	05/22/24	
Total Xylenes	ND	0.0250	1	05/21/24	05/22/24	
Surrogate: 4-Bromochlorobenzene-PID	91.3 %	70-130		05/21/24	05/22/24	
<b>Nonhalogenated Organics by EPA 8015D - GRO</b>	mg/kg	mg/kg	Analyst: RKS		Batch: 2421055	
Gasoline Range Organics (C6-C10)	ND	20.0	1	05/21/24	05/22/24	
Surrogate: 1-Chloro-4-fluorobenzene-FID	109 %	70-130		05/21/24	05/22/24	
<b>Nonhalogenated Organics by EPA 8015D - DRO/ORO</b>	mg/kg	mg/kg	Analyst: KM		Batch: 2421068	
Diesel Range Organics (C10-C28)	ND	25.0	1	05/21/24	05/23/24	
Oil Range Organics (C28-C36)	ND	50.0	1	05/21/24	05/23/24	
Surrogate: n-Nonane	106 %	50-200		05/21/24	05/23/24	
<b>Anions by EPA 300.0/9056A</b>	mg/kg	mg/kg	Analyst: IY		Batch: 2421056	
Chloride	319	20.0	1	05/21/24	05/21/24	



QC Summary Data

Vertex Resource Services Inc. 3101 Boyd Drive Carlsbad NM, 88220	Project Name: Zeus SWD Line Project Number: 24015-0001 Project Manager: Chance Dixon	Reported:  5/25/2024 9:05:25AM
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Volatile Organics by EPA 8021B

Analyst: RKS

Analyte	Result mg/kg	Reporting Limit mg/kg	Spike Level mg/kg	Source Result mg/kg	Rec %	Rec Limits %	RPD %	RPD Limit %	Notes
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Blank (2421055-BLK1) Prepared: 05/21/24 Analyzed: 05/22/24

Benzene	ND	0.0250							
Ethylbenzene	ND	0.0250							
Toluene	ND	0.0250							
o-Xylene	ND	0.0250							
p,m-Xylene	ND	0.0500							
Total Xylenes	ND	0.0250							
Surrogate: 4-Bromochlorobenzene-PID	7.38		8.00		92.3	70-130			

LCS (2421055-BS1) Prepared: 05/21/24 Analyzed: 05/24/24

Benzene	4.57	0.0250	5.00		91.4	70-130			
Ethylbenzene	4.33	0.0250	5.00		86.6	70-130			
Toluene	4.51	0.0250	5.00		90.2	70-130			
o-Xylene	4.40	0.0250	5.00		87.9	70-130			
p,m-Xylene	8.93	0.0500	10.0		89.3	70-130			
Total Xylenes	13.3	0.0250	15.0		88.8	70-130			
Surrogate: 4-Bromochlorobenzene-PID	7.45		8.00		93.1	70-130			

LCS Dup (2421055-BSD1) Prepared: 05/21/24 Analyzed: 05/24/24

Benzene	4.94	0.0250	5.00		98.8	70-130	7.82	20	
Ethylbenzene	4.68	0.0250	5.00		93.6	70-130	7.72	20	
Toluene	4.88	0.0250	5.00		97.6	70-130	7.84	20	
o-Xylene	4.76	0.0250	5.00		95.2	70-130	7.95	20	
p,m-Xylene	9.64	0.0500	10.0		96.4	70-130	7.68	20	
Total Xylenes	14.4	0.0250	15.0		96.0	70-130	7.77	20	
Surrogate: 4-Bromochlorobenzene-PID	7.45		8.00		93.1	70-130			



QC Summary Data

Vertex Resource Services Inc. 3101 Boyd Drive Carlsbad NM, 88220	Project Name: Zeus SWD Line Project Number: 24015-0001 Project Manager: Chance Dixon	Reported:  5/25/2024 9:05:25AM
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Nonhalogenated Organics by EPA 8015D - GRO

Analyst: RKS

Analyte	Result mg/kg	Reporting Limit mg/kg	Spike Level mg/kg	Source Result mg/kg	Rec %	Rec Limits %	RPD %	RPD Limit %	Notes
---------	-----------------	-----------------------------	-------------------------	---------------------------	----------	--------------------	----------	-------------------	-------

Blank (2421055-BLK1) Prepared: 05/21/24 Analyzed: 05/22/24

Gasoline Range Organics (C6-C10)	ND	20.0							
Surrogate: 1-Chloro-4-fluorobenzene-FID	8.60		8.00		108	70-130			

LCS (2421055-BS2) Prepared: 05/21/24 Analyzed: 05/24/24

Gasoline Range Organics (C6-C10)	58.8	20.0	50.0		118	70-130			
Surrogate: 1-Chloro-4-fluorobenzene-FID	8.74		8.00		109	70-130			

LCS Dup (2421055-BSD2) Prepared: 05/21/24 Analyzed: 05/24/24

Gasoline Range Organics (C6-C10)	55.5	20.0	50.0		111	70-130	5.69	20	
Surrogate: 1-Chloro-4-fluorobenzene-FID	8.83		8.00		110	70-130			



QC Summary Data

Vertex Resource Services Inc.	Project Name:	Zeus SWD Line	Reported:
3101 Boyd Drive	Project Number:	24015-0001	
Carlsbad NM, 88220	Project Manager:	Chance Dixon	5/25/2024 9:05:25AM

Nonhalogenated Organics by EPA 8015D - DRO/ORO

Analyst: KM

Analyte	Result mg/kg	Reporting Limit mg/kg	Spike Level mg/kg	Source Result mg/kg	Rec %	Rec Limits %	RPD %	RPD Limit %	Notes
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Blank (2421068-BLK1) Prepared: 05/21/24 Analyzed: 05/23/24

Diesel Range Organics (C10-C28)	ND	25.0							
Oil Range Organics (C28-C36)	ND	50.0							
Surrogate: n-Nonane	55.6		50.0		111	50-200			

LCS (2421068-BS1) Prepared: 05/21/24 Analyzed: 05/23/24

Diesel Range Organics (C10-C28)	225	25.0	250		90.1	38-132			
Surrogate: n-Nonane	56.4		50.0		113	50-200			

LCS Dup (2421068-BSD1) Prepared: 05/21/24 Analyzed: 05/23/24

Diesel Range Organics (C10-C28)	244	25.0	250		97.6	38-132	7.96	20	
Surrogate: n-Nonane	55.7		50.0		111	50-200			





QC Summary Data

Vertex Resource Services Inc. 3101 Boyd Drive Carlsbad NM, 88220	Project Name: Zeus SWD Line Project Number: 24015-0001 Project Manager: Chance Dixon	Reported:  5/25/2024 9:05:25AM
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Anions by EPA 300.0/9056A

Analyst: IY

Analyte	Result mg/kg	Reporting Limit mg/kg	Spike Level mg/kg	Source Result mg/kg	Rec %	Rec Limits %	RPD %	RPD Limit %	Notes
---------	-----------------	-----------------------------	-------------------------	---------------------------	----------	--------------------	----------	-------------------	-------

Blank (2421056-BLK1)					Prepared: 05/21/24 Analyzed: 05/21/24				
Chloride	ND	20.0							
LCS (2421056-BS1)					Prepared: 05/21/24 Analyzed: 05/21/24				
Chloride	251	20.0	250		100	90-110			
LCS Dup (2421056-BSD1)					Prepared: 05/21/24 Analyzed: 05/21/24				
Chloride	252	20.0	250		101	90-110	0.266	20	

QC Summary Report Comment:  
Calculations are based off of the raw (non-rounded) data. However, for reporting purposes all QC data is rounded to three significant figures.  
Therefore, hand calculated values may differ slightly.



Definitions and Notes

Vertex Resource Services Inc.	Project Name:	Zeus SWD Line	
3101 Boyd Drive	Project Number:	24015-0001	Reported:
Carlsbad NM, 88220	Project Manager:	Chance Dixon	05/25/24 09:05

- ND      Analyte NOT DETECTED at or above the reporting limit
- NR      Not Reported
- RPD      Relative Percent Difference
- DNI      Did Not Ignite
- DNR      Did not react with the addition of acid or base.
- Note (1): Methods marked with \*\* are non-accredited methods.
- Note (2): Soil data is reported on an "as received" weight basis, unless reported otherwise.





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## Envirotech Analytical Laboratory

Printed: 5/21/2024 4:46:01PM

## Sample Receipt Checklist (SRC)

Instructions: Please take note of any NO checkmarks.

If we receive no response concerning these items within 24 hours of the date of this notice, all the samples will be analyzed as requested.

Client:	Vertex Resource Services Inc.	Date Received:	05/21/24 08:00	Work Order ID:	E405276
Phone:	(575) 748-0176	Date Logged In:	05/20/24 17:44	Logged In By:	Alexa Michaels
Email:	cdixon@vertex.ca	Due Date:	05/23/24 17:00 (2 day TAT)		

Chain of Custody (COC)

1. Does the sample ID match the COC? Yes
2. Does the number of samples per sampling site location match the COC? Yes
3. Were samples dropped off by client or carrier? Yes
4. Was the COC complete, i.e., signatures, dates/times, requested analyses? Yes
5. Were all samples received within holding time? Yes

Note: Analysis, such as pH which should be conducted in the field, i.e., 15 minute hold time, are not included in this discussion.

Carrier: CourierComments/ResolutionSample Turn Around Time (TAT)

6. Did the COC indicate standard TAT, or Expedited TAT? Yes

Sample Cooler

7. Was a sample cooler received? Yes
8. If yes, was cooler received in good condition? Yes
9. Was the sample(s) received intact, i.e., not broken? Yes
10. Were custody/security seals present? No
11. If yes, were custody/security seals intact? NA
12. Was the sample received on ice? If yes, the recorded temp is 4°C, i.e., 6°±2°C? Yes

Note: Thermal preservation is not required, if samples are received w/i 15 minutes of sampling

13. If no visible ice, record the temperature. Actual sample temperature: 4°C

Sample Container

14. Are aqueous VOC samples present? No
15. Are VOC samples collected in VOA Vials? NA
16. Is the head space less than 6-8 mm (pea sized or less)? NA
17. Was a trip blank (TB) included for VOC analyses? NA
18. Are non-VOC samples collected in the correct containers? Yes
19. Is the appropriate volume/weight or number of sample containers collected? Yes

Field Label

20. Were field sample labels filled out with the minimum information:  
Sample ID? Yes  
Date/Time Collected? Yes  
Collectors name? Yes

Sample Preservation

21. Does the COC or field labels indicate the samples were preserved? No
22. Are sample(s) correctly preserved? NA
24. Is lab filtration required and/or requested for dissolved metals? No

Multiphase Sample Matrix

26. Does the sample have more than one phase, i.e., multiphase? No
27. If yes, does the COC specify which phase(s) is to be analyzed? NA

Subcontract Laboratory

28. Are samples required to get sent to a subcontract laboratory? No
29. Was a subcontract laboratory specified by the client and if so who? NA Subcontract Lab: NA

Client Instruction

Signature of client authorizing changes to the COC or sample disposition.

Date



envirotech Inc.

## **APPENDIX F – Depth to Groundwater Drilling**



# WELL RECORD & LOG

OFFICE OF THE STATE ENGINEER

[www.ose.state.nm.us](http://www.ose.state.nm.us)

1. GENERAL AND WELL LOCATION	OSE POD NO. (WELL NO.) C 04824		WELL TAG ID NO.		OSE FILE NO(S) C-4824			
	WELL OWNER NAME(S) Tap Rock Resources				PHONE (OPTIONAL)			
	WELL OWNER MAILING ADDRESS 523 Park Point DR. Suite 200				CITY Golden	STATE CO	ZIP 80401	
	WELL LOCATION (FROM GPS)	DEGREES LATITUDE 32	MINUTES 13	SECONDS 28.04 N	* ACCURACY REQUIRED: ONE TENTH OF A SECOND			
		LONGITUDE -103	34	36.24 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 4-16-24	DRILLING ENDED 4-16-24	DEPTH OF COMPLETED WELL (FT) 105'	BORE HOLE DEPTH (FT) 105'	DEPTH WATER FIRST ENCOUNTERED (FT) N/A			
	COMPLETED WELL IS: <input type="checkbox"/> ARTESIAN *add Centralizer info below <input checked="" type="checkbox"/> DRY HOLE <input type="checkbox"/> SHALLOW (UNCONFINED)				STATIC WATER LEVEL IN COMPLETED WELL (FT) 0'	DATE STATIC MEASURED 4-16-24		
	DRILLING FLUID: <input checked="" type="checkbox"/> AIR <input type="checkbox"/> MUD ADDITIVES – SPECIFY:							
	DRILLING METHOD: <input checked="" type="checkbox"/> ROTARY <input type="checkbox"/> HAMMER <input type="checkbox"/> CABLE TOOL <input type="checkbox"/> OTHER – SPECIFY:					CHECK HERE IF PITLESS ADAPTER IS INSTALLED <input type="checkbox"/>		
	DEPTH (feet bgl) FROM TO		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)
	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) FROM TO		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	
				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	20	20'	Brown dirt with white caliche	Y    ✓ N	
	20	60	40'	Red and Brown clay with small rock	Y    ✓ N	
	60	110	50'	Gray Green Rock with Fine sand	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	
<input type="checkbox"/> PUMP <input type="checkbox"/> AIR LIFT <input type="checkbox"/> BAILER <input type="checkbox"/> 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:  <div style="display: flex; justify-content: space-between; align-items: flex-end;"> <div style="text-align: center;">             _____            SIGNATURE OF DRILLER / PRINT SIGNEE NAME         </div> <div style="text-align: center;">             Jason Maley              _____              DATE           </div> <div style="text-align: center;">               4/24/24           </div> </div>
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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





# 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-04824  
 Well owner: Taprock Resources Phone No.: \_\_\_\_\_  
 Mailing address: 523 Park Point Drive Suite 200  
 City: Golden State: CO Zip code: 80401

## 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: 4-22-24 Date well plugging concluded: 4-22-24
- 5) GPS Well Location: Latitude: 32 deg, 13 min, 28.04 sec  
 Longitude: -103 deg, 34 min, 36.24 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: 3-14-24
- 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.

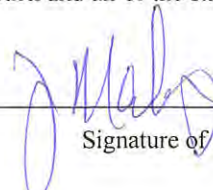
For each interval plugged, describe within the following columns:

<u>Depth</u> (ft bgl)	<u>Plugging Material Used</u> (include any additives used)	<u>Volume of Material Placed</u> (gallons)	<u>Theoretical Volume of Borehole/ Casing</u> (gallons)	<u>Placement Method</u> (tremie pipe, other)	<u>Comments</u> ("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

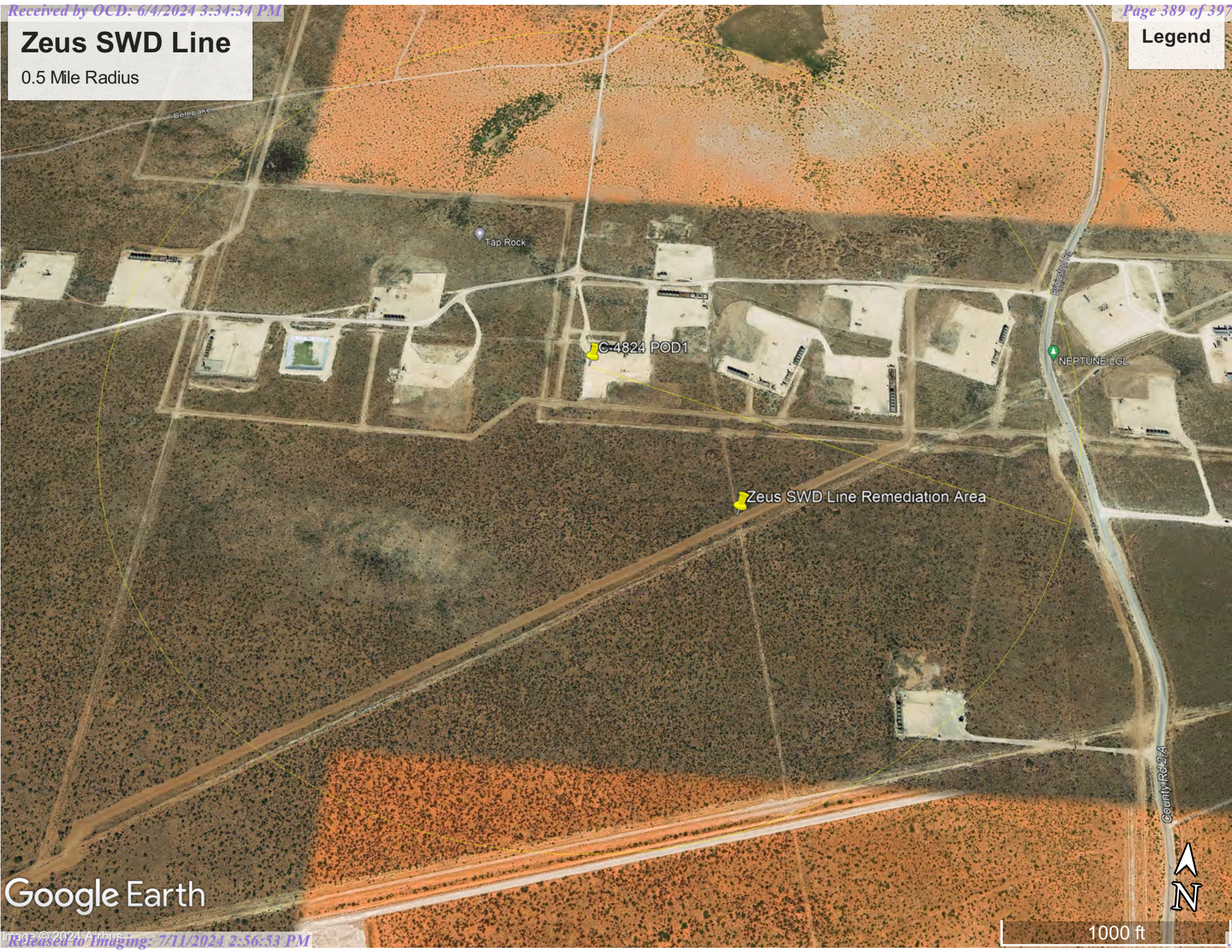
4/24/24  
Date



# Zeus SWD Line

0.5 Mile Radius

Legend



Google Earth

1000 ft



**District I**  
1625 N. French Dr., Hobbs, NM 88240  
Phone:(575) 393-6161 Fax:(575) 393-0720  
**District II**  
811 S. First St., Artesia, NM 88210  
Phone:(575) 748-1283 Fax:(575) 748-9720  
**District III**  
1000 Rio Brazos Rd., Aztec, NM 87410  
Phone:(505) 334-6178 Fax:(505) 334-6170  
**District IV**  
1220 S. St Francis Dr., Santa Fe, NM 87505  
Phone:(505) 476-3470 Fax:(505) 476-3462

State of New Mexico  
Energy, Minerals and Natural Resources  
Oil Conservation Division  
1220 S. St Francis Dr.  
Santa Fe, NM 87505

QUESTIONS  
  
Action 350762

QUESTIONS

Operator: TAP ROCK OPERATING, LLC 523 Park Point Drive Golden, CO 80401	OGRID:	372043
	Action Number:	350762
	Action Type:	[C-141] Remediation Closure Request C-141 (C-141-v-Closure)

QUESTIONS

Prerequisites	
Incident ID (n#)	nRM2026231125
Incident Name	NRM2026231125 ZEUS SWD LINE @ 0
Incident Type	Produced Water Release
Incident Status	Remediation Closure Report Approved

Location of Release Source	
Please answer all the questions in this group.	
Site Name	ZEUS SWD LINE
Date Release Discovered	09/03/2020
Surface Owner	State

Incident Details	
Please answer all the questions in this group.	
Incident Type	Produced Water Release
Did this release result in a fire or is the result of a fire	No
Did this release result in any injuries	No
Has this release reached or does it have a reasonable probability of reaching a watercourse	No
Has this release endangered or does it have a reasonable probability of endangering public health	No
Has this release substantially damaged or will it substantially damage property or the environment	No
Is this release of a volume that is or may with reasonable probability be detrimental to fresh water	No

Nature and Volume of Release	
Material(s) released, please answer all that apply below. Any calculations or specific justifications for the volumes provided should be attached to the follow-up C-141 submission.	
Crude Oil Released (bbls) Details	Not answered.
Produced Water Released (bbls) Details	Cause: Equipment Failure   Other (Specify)   Produced Water   Released: 20 BBL   Recovered: 5 BBL   Lost: 15 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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**State of New Mexico**  
**Energy, Minerals and Natural Resources**  
**Oil Conservation Division**  
**1220 S. St Francis Dr.**  
**Santa Fe, NM 87505**

QUESTIONS, Page 2

Action 350762

**QUESTIONS (continued)**

Operator: TAP ROCK OPERATING, LLC 523 Park Point Drive Golden, CO 80401	OGRID:
	372043
	Action Number:
	350762
	Action Type:
	[C-141] Remediation Closure Request C-141 (C-141-v-Closure)

**QUESTIONS**

Nature and Volume of Release (continued)	
Is this a gas only submission (i.e. only significant Mcf values reported)	No, according to supplied volumes this does not appear to be a "gas only" report.
Was this a major release as defined by Subsection A of 19.15.29.7 NMAC	No
Reasons why this would be considered a submission for a notification of a major release	Unavailable.
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	False
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	Release materials are not longer on site.

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: Chance Dixon Title: Project Manager Email: cdixon@vertex.ca Date: 06/04/2024
--	---

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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, Page 3

Action 350762

**QUESTIONS (continued)**

Operator: TAP ROCK OPERATING, LLC 523 Park Point Drive Golden, CO 80401	OGRID:	372043
	Action Number:	350762
	Action Type:	[C-141] Remediation Closure Request C-141 (C-141-v-Closure)

**QUESTIONS****Site Characterization**

Please answer all the questions in this group (only required when seeking remediation plan approval and beyond). This information must be provided to the appropriate district office no later than 90 days after the release discovery date.

What is the shallowest depth to groundwater beneath the area affected by the release in feet below ground surface (ft bgs)	Less than or equal 25 (ft.)
What method was used to determine the depth to ground water	NM OSE iWaters Database Search
Did this release impact groundwater or surface water	No
<b>What is the minimum distance, between the closest lateral extents of the release and the following surface areas:</b>	
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)	Between ½ and 1 (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	Between ½ and 1 (mi.)
Any other fresh water well or spring	Between 1 and 5 (mi.)
Incorporated municipal boundaries or a defined municipal fresh water well field	Between 1 and 5 (mi.)
A wetland	Between ½ and 1 (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)	18600
TPH (GRO+DRO+MRO) (EPA SW-846 Method 8015M)	0
GRO+DRO (EPA SW-846 Method 8015M)	0
BTEX (EPA SW-846 Method 8021B or 8260B)	0
Benzene (EPA SW-846 Method 8021B or 8260B)	0

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	04/15/2024
On what date will (or did) the final sampling or liner inspection occur	04/15/2024
On what date will (or was) the remediation complete(d)	07/01/2024
What is the estimated surface area (in square feet) that will be reclaimed	28000
What is the estimated volume (in cubic yards) that will be reclaimed	5000
What is the estimated surface area (in square feet) that will be remediated	28000
What is the estimated volume (in cubic yards) that will be remediated	5000

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 350762

**QUESTIONS (continued)**

Operator: TAP ROCK OPERATING, LLC 523 Park Point Drive Golden, CO 80401	OGRID:	372043
	Action Number:	350762
	Action Type:	[C-141] Remediation Closure Request C-141 (C-141-v-Closure)

**QUESTIONS**

<b>Remediation Plan (continued)</b>	
<i>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.</i>	
<b>This remediation will (or is expected to) utilize the following processes to remediate / reduce contaminants:</b>	
<i>(Select all answers below that apply.)</i>	
(Ex Situ) Excavation and <b>off-site</b> disposal (i.e. dig and haul, hydrovac, etc.)	Yes
Which OCD approved facility will be used for <b>off-site</b> disposal	Not answered.
<b>OR</b> which OCD approved well (API) will be used for <b>off-site</b> disposal	30-025-41122 JACKSON UNIT #011H
<b>OR</b> is the <b>off-site</b> disposal site, to be used, out-of-state	No
<b>OR</b> is the <b>off-site</b> disposal site, to be used, an NMED facility	No
(Ex Situ) Excavation and <b>on-site</b> remediation (i.e. On-Site Land Farms)	No
(In Situ) Soil Vapor Extraction	No
(In Situ) Chemical processing (i.e. Soil Shredding, Potassium Permanganate, etc.)	No
(In Situ) Biological processing (i.e. Microbes / Fertilizer, etc.)	No
(In Situ) Physical processing (i.e. Soil Washing, Gypsum, Disking, etc.)	No
Ground Water Abatement pursuant to 19.15.30 NMAC	No
OTHER (Non-listed remedial process)	No
<i>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>	
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: Chance Dixon Title: Project Manager Email: cdixon@vertex.ca Date: 06/04/2024
<i>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.</i>	



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Action 350762

QUESTIONS (continued)

Operator:  TAP ROCK OPERATING, LLC 523 Park Point Drive Golden, CO 80401	OGRID:
	372043
	Action Number:
	350762
Action Type:	
[C-141] Remediation Closure Request C-141 (C-141-v-Closure)	

QUESTIONS

<b>Deferral Requests Only</b>	
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

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QUESTIONS, Page 6

Action 350762

**QUESTIONS (continued)**

Operator: TAP ROCK OPERATING, LLC 523 Park Point Drive Golden, CO 80401	OGRID:	372043
	Action Number:	350762
	Action Type:	[C-141] Remediation Closure Request C-141 (C-141-v-Closure)

**QUESTIONS**

Sampling Event Information	
Last sampling notification (C-141N) recorded	344982
Sampling date pursuant to Subparagraph (a) of Paragraph (1) of Subsection D of 19.15.29.12 NMAC	05/24/2024
What was the (estimated) number of samples that were to be gathered	10
What was the sampling surface area in square feet	2000

**Remediation Closure Request**

*Only answer the questions in this group if seeking remediation closure for this release because all remediation steps have been completed.*

Requesting a remediation closure approval with this submission	Yes
Have the lateral and vertical extents of contamination been fully delineated	Yes
Was this release entirely contained within a lined containment area	No
All areas reasonably needed for production or subsequent drilling operations have been stabilized, returned to the sites existing grade, and have a soil cover that prevents ponding of water, minimizing dust and erosion	Yes
What was the total surface area (in square feet) remediated	10488
What was the total volume (cubic yards) remediated	1900
All areas not reasonably needed for production or subsequent drilling operations have been reclaimed to contain a minimum of four feet of non-waste contain earthen material with concentrations less than 600 mg/kg chlorides, 100 mg/kg TPH, 50 mg/kg BTEX, and 10 mg/kg Benzene	Yes
What was the total surface area (in square feet) reclaimed	10488
What was the total volume (in cubic yards) reclaimed	1900
Summarize any additional remediation activities not included by answers (above)	The site was remediated and reclaimed with the top four feet meeting strictest closure criteria.

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

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

I hereby agree and sign off to the above statement	Name: Chance Dixon Title: Project Manager Email: cdixon@vertex.ca Date: 06/04/2024
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Action 350762

QUESTIONS (continued)

Operator: TAP ROCK OPERATING, LLC 523 Park Point Drive Golden, CO 80401	OGRID: 372043
	Action Number: 350762
	Action Type: [C-141] Remediation Closure Request C-141 (C-141-v-Closure)

QUESTIONS

Reclamation Report	
Only answer the questions in this group if all reclamation steps have been completed.	
Requesting a reclamation approval with this submission	No

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CONDITIONS  
  
Action 350762

CONDITIONS

Operator: TAP ROCK OPERATING, LLC 523 Park Point Drive Golden, CO 80401	OGRID: 372043
	Action Number: 350762
	Action Type: [C-141] Remediation Closure Request C-141 (C-141-v-Closure)

CONDITIONS

Created By	Condition	Condition Date
nvelez	None	7/11/2024