General Information

NMOCD District:	District 1 – Hobbs	Incident ID:	nSAP0215477198
Landowner:	NMSLO	API:	30-025-33238
Client:	Tap Rock Operating, LLC	Site Location:	Jackson Unit #003
Date:	August 28, 2024	Project #:	24E-03316,
Client Contact:	Bill Ramsey	Phone #:	720.238.2787
Vertex PM:	Chance Dixon	Phone #:	575.988.1472

Objective

The objective of the environmental remediation work plan is to identify exceedances found during the site assessment/characterization activity and propose an appropriate remediation technique to address the open release at Jackson Unit #003. The release involved crude oil discharged onto the pad from a leak in the tank bottom. The release occurred inside and stayed within the earthen containment around the tank. Approximately 200 bbl of crude oil was released and none was recovered. The site has since been reclaimed. Areas of environmental concern identified and delineated include the former containment area on the south side of the reclaimed pad. An aerial photograph of the site with characterization locations and approximate release area is presented on Figure 1 (Attachment 1). The current closure criteria have been selected as per New Mexico Administrative Code (NMAC) 19.15.29.12 and are presented below.

Table 2. Closure Criteria for Soils to Remediation & Reclamation Standards

	Constituent	Limit
0-4 feet bgs (19.15.29.13)	Chloride	600 mg/kg
	TPH (GRO+DRO+MRO)	100 mg/kg
DTGW > 100 feet (19.15.29.12)	Chloride	20,000 mg/kg
	TPH (GRO+DRO+MRO)	2,500 mg/kg
	GRO+DRO	1,000 mg/kg
	BTEX	50 mg/kg
	Benzene	10 mg/kg

TDS – Total dissolved solids
DTGW – Depth to groundwater
TPH – Total petroleum hydrocarbons = gasoline range organics (GRO) + diesel range organics (DRO) + motor oil range organics (MRO),
BTEX – Benzene, toluene, ethylbenzene, and xylenes

Site Assessment/Characterization

Site characterization was started on July 4, 2024, and completed on August 7, 2024. A total of 17 sample points (boreholes) were established and samples were collected for field screening. Samples were obtained at various depths for horizontal delineation. Vertical delineation was not completed and is not required under the closure criteria in Table 1. In total, 72 samples were submitted to Envirotech Laboratory in Farmington, New Mexico, for analysis. The sample locations are presented on Figure 1 (Attachment 1). Laboratory analysis results have been compared to the above-noted closure criteria and the results from the characterization activity are presented in Table 2 (Attachment 2). Daily field reports and laboratory data reports are included in Attachments 3 and 4, respectively. All applicable research as it pertains to closure criteria selection is presented in Attachment 5. Exceedances to reclamation and remediation criteria are identified in the table as bold with a green or grey background, respectively.

Closure Criteria Determination

The depth to groundwater was determined by drilling a borehole permitted by the New Mexico Office of the State Engineer (NMOSE) on the site within 0.5 miles. The borehole was drilled to a depth of 105 feet. 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 WD-08 permit, Well Plugging Plan of Operations, filed with NMOSE. Documentation related to the exploratory borehole is included in Attachment 5.

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 an intermittent stream (National Wetlands Inventory) located approximately 1.5 miles east 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.

Proposed Remedial Activities

Areas identified with contaminant concentrations above closure criteria will be remediated through excavation with mechanical excavation equipment. Laboratory results from the site assessment/characterization have been referenced to estimate both the vertical and horizontal limits of the impacts and the volume of soil to be removed. The soil will be excavated to the extent of the known impact above the NMOCD's reclamation closure criteria for areas where depth to groundwater is greater than 100 feet with the top 4 feet meeting the strictest standards as per 19.15.29.13 NMAC. Field screening will be utilized to confirm the removal of impacted soil below the applicable closure criteria. Excavated soil will be stored on a 30-mil liner prior to disposal at an approved facility. Once excavation is complete, confirmatory samples will be collected and laboratory analysis completed to confirm closure criteria guidelines are met. Excavations will be backfilled with clean soil sourced locally.

Former Containment Area - nSAP0215477198

Exceedances to closure criteria were identified at sample points BH23-02, BH23-05, BH23-07, and BH23-09. The sample locations and proposed excavations are presented on Figures 1 and 2 (Attachment 1). The two areas of impact identified will be excavated to 4 feet bgs with an 8' excavation in the direct vicinity of BH24-09 located within the west 4' excavation. Heavy equipment will be utilized to perform removal of contaminated soil. A hydrovac truck or hand tools will be utilized to remove impacted soil in close proximity to underground infrastructure identified prior to or during excavation. Field screening will be utilized to find the horizontal and vertical extents of the impacted area. Confirmation samples will be collected as per NMOCD guidance and submitted for laboratory analysis of all applicable parameters. **The estimated volume to be excavated is approximately 360 cubic yards.** Excavation is planned to be completed within 90 days of approval of this Environmental Site Remediation Work Plan. The planned depths of each exceedance are listed below.

Sample Point	Excavation Depth	Remediation Method
BH24-02	4'	Excavator
BH22-05	4'	Excavator
BH22-07	4'	Excavator
BH22-09	6'	Excavator

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

Lakin Pullman
Lakin Pullman, B.Sc.
ENVIRONMENTAL SPECIALIST, REPORTING

8/28/2024
Date

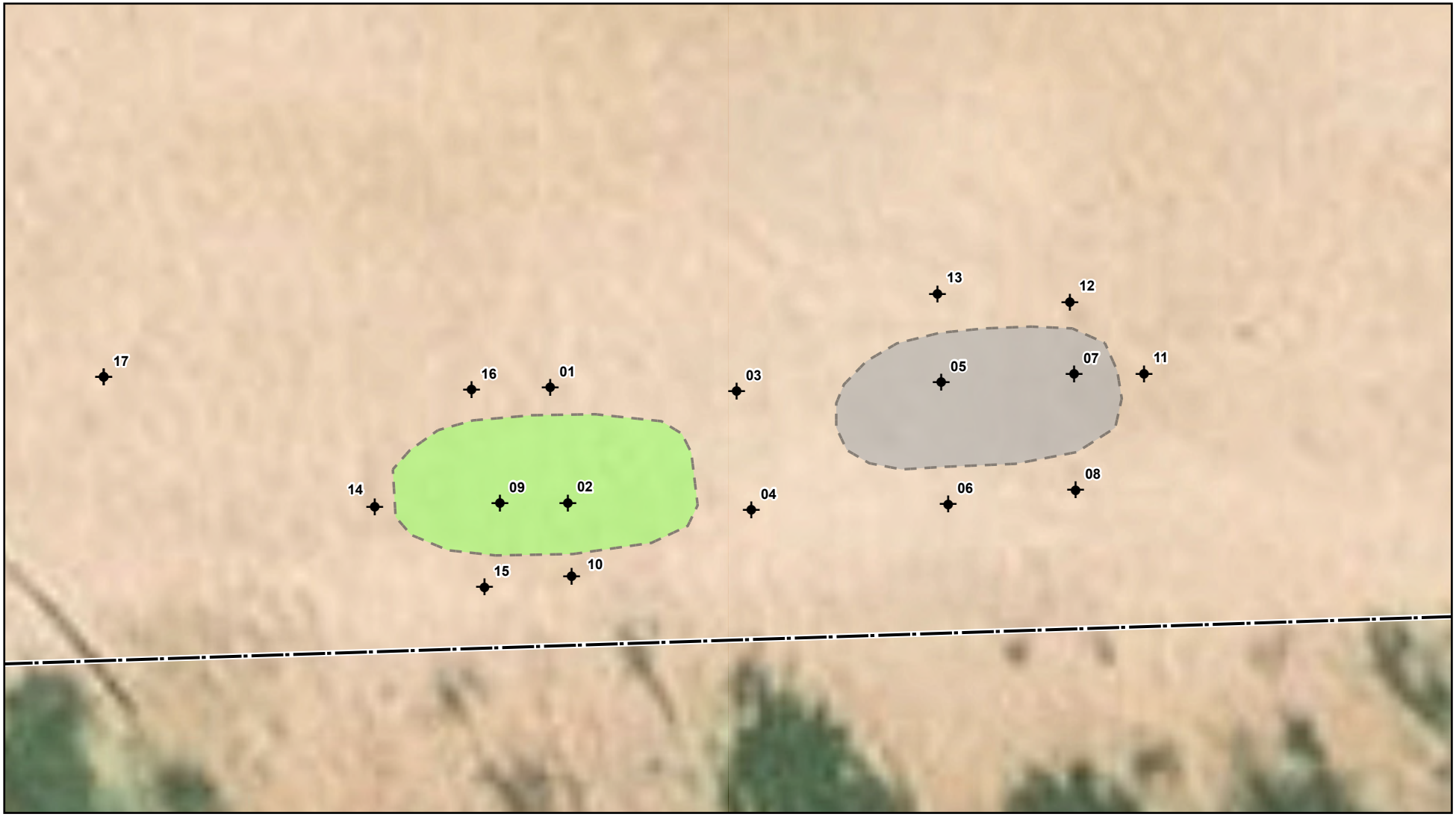
Chance Dixon
Chance Dixon, B.Sc.
PROJECT MANAGER, REPORT REVIEW

8/28/2024
Date

Attachments

Attachment 1. Figures
Attachment 2. Field Screening and Laboratory Results Table
Attachment 3. Daily Field Reports with Photographs
Attachment 4. Laboratory Data Reports with Chain of Custody Forms
Attachment 5. Closure Criteria Research

Attachment 1



Borehole (Prefixed by "BH24-") | Approximate Site Boundary | East Area of Impact (~453 sq.ft. | 84 ft.) | West Area of Impact (~497 sq.ft. | 89 ft.)

VERTEX

0 5 10 ft

NAD 1983 UTM Zone 13N

Date: Aug 01/24

Map Center:
Lat/Long
32.211788°,-103.562285°

N

Characterization Sampling Site Schematic
Jackson Unit #003

FIGURE:
1

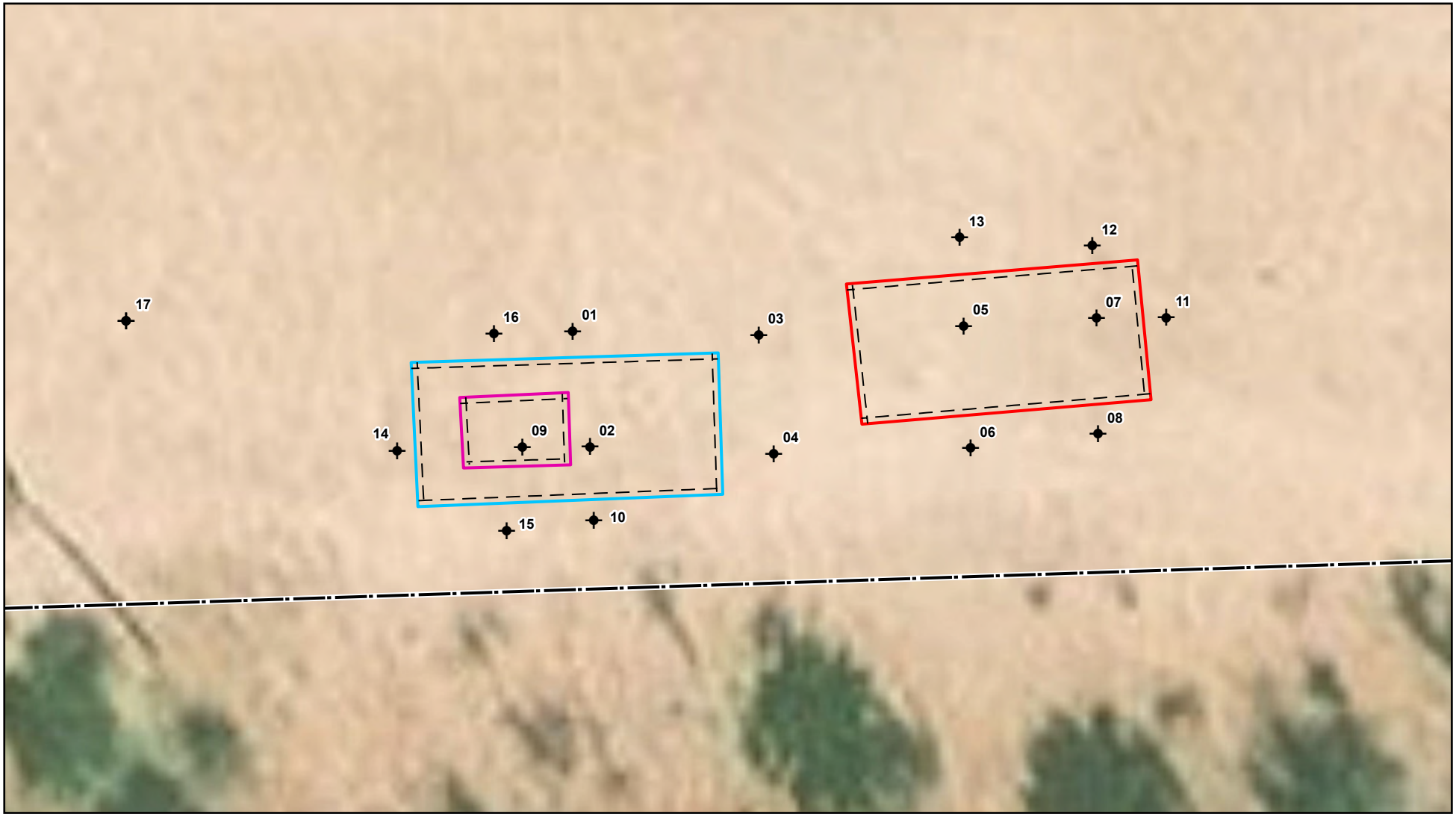
TAP ROCK RESOURCES

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

Note: Georeferenced image from Esri, 2023. Approximate site boundary from sketch by Vertex Professional Services Ltd. (Vertex), 2024. Site features from GPS, Vertex, 2024.

VERSATILITY. EXPERTISE.

Document Path: G:\1-Projects\ US PROJECTS\Tap Rock\2024\24E-03316\Project\24E-03316.aprx



Borehole (Prefixed by "BH24-")

Approximate Site Boundary

East Proposed Excavation to 4' bgs (~554 sq.ft. | 101 ft.)

West Proposed Excavation to 4' bgs (~487 sq.ft. | 105 ft.)

West Proposed Excavation to 8' bgs (~104 sq.ft. | 42 ft.)

VERTEX

0 5 10 ft

NAD 1983 UTM Zone 13N

Date: Aug 01/24

Map Center:
Lat/Long
32.21177°,-103.562294°

N

Proposed Excavation Schematic
Jackson Unit #003

FIGURE:
2

TAP ROCK RESOURCES

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

Note: Georeferenced image from Esri, 2023. Approximate site boundary from sketch by Vertex Professional Services Ltd. (Vertex), 2024. Site features from GPS, Vertex, 2024.

VERSATILITY. EXPERTISE.

Document Path: G:\1-Projects\ US PROJECTS\Tap Rock\2024\24E-03316\Project\24E-03316.aprx

Attachment 2

Client Name: Tap Rock Operating, LLC
Site Name: Jackson Unit #003
NMOCD Tracking #: nSAP0215477198
Project #: 24E-03316
Lab Reports: E407052, E407053, E407173, E408081, and E408143

Table 2. Initial Characterization Sample Field Screen and Laboratory Results DTGW >100 feet bgs (Reclamation)

Sample Description			Field Screening			Petroleum Hydrocarbons							Inorganic
						Volatile		Extractable					
Sample ID	Depth (ft)	Sample Date	Volatile Organic Compounds (PID)	Extractable Organic Compounds (PetroFlag)	Chloride Concentration	Benzene	BTEX (Total)	Gasoline Range Organics (GRO)	Diesel Range Organics (DRO)	Motor Oil Range Organics (MRO)	(GRO + DRO)	Total Petroleum Hydrocarbons (TPH)	Chloride Concentration
			(ppm)	(ppm)	(ppm)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)
BH24-01	0	July 4, 2024	3	34	250	ND	ND	ND	ND	ND	ND	ND	42.2
	1	July 4, 2024	3	38	200	ND	ND	ND	ND	ND	ND	ND	ND
	2	July 4, 2024	4	27	175	ND	ND	ND	ND	ND	ND	ND	ND
	3	July 4, 2024	5	45	150	ND	ND	ND	ND	ND	ND	ND	ND
	4	July 4, 2024	4	50	165	ND	ND	ND	ND	ND	ND	ND	ND
BH24-02	0	July 4, 2024	6	45	250	ND	ND	ND	ND	ND	ND	ND	ND
	1	July 4, 2024	3	136	275	ND	ND	ND	ND	ND	ND	ND	ND
	2	July 4, 2024	4	35	175	ND	ND	ND	45.7	ND	45.7	45.7	ND
	3	July 4, 2024	7	209	225	ND	ND	ND	169	79.2	**169**	**248.2**	ND
	4	July 4, 2024	14	275	225	ND	ND	ND	321	116	321	437	ND
	5	July 5, 2024	8	185	375	ND	ND	ND	412	84.6	412	496.6	ND
	6	July 5, 2024	7	137	175	ND	ND	ND	237	67.7	237	304.7	ND
BH24-03	0	July 4, 2024	4	39	300	ND	ND	ND	ND	ND	ND	ND	ND
	1	July 4, 2024	4	52	300	ND	ND	ND	ND	ND	ND	ND	ND
	2	July 4, 2024	3	53	200	ND	ND	ND	ND	ND	ND	ND	ND
	3	July 4, 2024	4	33	175	ND	ND	ND	ND	ND	ND	ND	ND
BH24-04	0	July 4, 2024	4	43	150	ND	ND	ND	ND	ND	ND	ND	ND
	1	July 4, 2024	4	42	150	ND	ND	ND	ND	ND	ND	ND	ND
	2	July 4, 2024	4	27	170	ND	ND	ND	ND	ND	ND	ND	ND
	3	July 4, 2024	4	22	175	ND	ND	ND	ND	ND	ND	ND	ND
BH24-05	0	July 4, 2024	0	55	200	ND	ND	ND	ND	ND	ND	ND	ND
	1	July 4, 2024	0	52	250	ND	ND	ND	ND	ND	ND	ND	ND
	2	July 4, 2024	0	91	125	ND	ND	ND	ND	ND	ND	ND	ND
	3	July 4, 2024	1	150	130	ND	ND	ND	68	54.7	68	**122.7**	ND
	4	July 4, 2024	2	182	125	ND	ND	ND	156	90.6	156	246.6	ND
	5	July 5, 2024	5	222	598	ND	ND	ND	334	88.4	334	422.4	22
BH24-06	0	July 4, 2024	1	54	125	ND	ND	ND	ND	ND	ND	ND	ND
	1	July 4, 2024	1	40	165	ND	ND	ND	ND	ND	ND	ND	ND
	2	July 4, 2024	6	41	150	ND	ND	ND	ND	ND	ND	ND	ND
	3	July 4, 2024	4	65	155	ND	ND	ND	ND	ND	ND	ND	44
	4	July 4, 2024	4	55	175	ND	ND	ND	ND	ND	ND	ND	49
BH24-07	0	July 5, 2024	0	41	200	ND	ND	ND	ND	ND	ND	ND	ND
	1	July 5, 2024	0	54	155	ND	ND	ND	ND	ND	ND	ND	ND
	2	July 5, 2024	0	57	190	ND	ND	ND	ND	ND	ND	ND	23
	3	July 5, 2024	0	74	250	ND	ND	ND	ND	ND	ND	ND	25
	4	July 5, 2024	5	225	270	ND	ND	ND	412	115	412	527	20
BH24-08	0	July 5, 2024	0	51	350	ND	ND	ND	ND	ND	ND	ND	ND
	1	July 5, 2024	0	42	225	ND	ND	ND	ND	ND	ND	ND	ND
	2	July 5, 2024	0	40	425	ND	ND	ND	ND	ND	ND	ND	84
	3	July 5, 2024	0	62	575	ND	ND	ND	ND	ND	ND	ND	142
	4	July 5, 2024	0	60	598	ND	ND	ND	ND	ND	ND	ND	91
BH24-09	0	July 15, 2024	-	61	0	ND	ND	ND	ND	ND	ND	ND	ND
	2	July 15, 2024	-	110	0	ND	ND	ND	45	ND	45	45	ND
	4	July 15, 2024	-	781	0	ND	ND	51.8	2880	331	**2931.8**	**3262.8**	54
	6	August 7, 2024	1,100	1,500	431	-	-	-	-	-	-	-	-
	7	August 7, 2024	1,084	1,149	377	1.17	17.9	434	**1220**	71.8	1654	1725.8	29.3
	8	August 15, 2024	-	597	235	ND	8.01	216	730	58.2	946	1004.2	55.2
BH24-10	0	July 15, 2024	-	53	0	ND	ND	ND	26	ND	26	26	ND
	2	July 15, 2024	-	42	0	ND	ND	ND	ND	ND	ND	ND	ND
BH24-11	0	July 15, 2024	-	42	132	ND	ND	ND	ND	ND	ND	ND	53.6
	2	July 15, 2024	-	23	0	ND	ND	ND	ND	ND	ND	ND	106
	4	July 15, 2024	-	72	0	ND	ND	ND	ND	ND	ND	ND	404
BH24-12	0	July 15, 2024	-	36	62	ND	ND	ND	ND	ND	ND	ND	48.5
	2	July 15, 2024	-	31	112	ND	ND	ND	ND	ND	ND	ND	76.5

VERTEX

Client Name: Tap Rock Operating, LLC
Site Name: Jackson Unit #003
NMOCD Tracking #: nSAP0215477198
Project #: 24E-03316
Lab Reports: E407052, E407053, E407173, E408081, and E408143

Table 2. Initial Characterization Sample Field Screen and Laboratory Results DTGW >100 feet bgs (Reclamation)

Sample Description			Field Screening			Petroleum Hydrocarbons							Inorganic
						Volatile		Extractable					
Sample ID	Depth (ft)	Sample Date	Volatile Organic Compounds (PID)	Extractable Organic Compounds (PetroFlag)	Chloride Concentration	Benzene	BTEX (Total)	Gasoline Range Organics (GRO)	Diesel Range Organics (DRO)	Motor Oil Range Organics (MRO)	(GRO + DRO)	Total Petroleum Hydrocarbons (TPH)	Chloride Concentration
			(ppm)	(ppm)	(ppm)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)
BH24-13	0	July 15, 2024	-	32	0	ND	ND	ND	ND	ND	ND	ND	ND
	2	July 15, 2024	-	28	0	ND	ND	ND	ND	ND	ND	ND	34.5
	4	July 15, 2024	-	34	0	ND	ND	ND	ND	ND	ND	ND	66.3
BH24-14	0	July 19, 2024	-	18	0	ND	ND	ND	ND	ND	ND	ND	ND
	2	July 19, 2024	-	15	0	ND	ND	ND	ND	ND	ND	ND	35
	4	July 19, 2024	-	37	0	ND	ND	ND	ND	ND	ND	ND	72.6
BH24-15	0	July 19, 2024	-	55	0	ND	ND	ND	ND	ND	ND	ND	ND
	0	July 19, 2024	-	28	0	ND	ND	ND	ND	ND	ND	ND	ND
	2	July 19, 2024	-	13	0	ND	ND	ND	ND	ND	ND	ND	109
BH24-16	0	July 19, 2024	-	44	98	ND	ND	ND	ND	ND	ND	ND	117
	2	July 19, 2024	-	20	217	ND	ND	ND	ND	ND	ND	ND	280
	4	July 19, 2024	-	37	0	ND	ND	ND	ND	ND	ND	ND	289
BH24-17	0	July 19, 2024	-	0	0	ND	ND	ND	ND	ND	ND	ND	ND
	0	July 19, 2024	-	14	0	ND	ND	ND	ND	ND	ND	ND	ND
	2	July 19, 2024	-	13	0	ND	ND	ND	ND	ND	ND	ND	34

"ND" Not Detected at the Reporting Limit
"-" indicates not analyzed/assessed
Bold and grey shaded indicates exceedance outside of NMOCD Remediation Closure Criteria

Attachment 3

Daily Site Visit Report

Client:	Tap Rock	Inspection Date:	7/4/2024
Site Location Name:	Jackson Unit #003	Report Run Date:	7/5/2024 2:39 AM
Client Contact Name:	Bill Ramsey	API #:	
Client Contact Phone #:	720-238-2787		
Unique Project ID		Project Owner:	
Project Reference #		Project Manager:	

Summary of Times

Arrived at Site	7/4/2024 7:24 AM
Departed Site	7/4/2024 4:44 PM

Field Notes

7:36 Completed JSA on arrival. On site to assess historical release via characterization. Historical release occurred within tank battery unlined earthen berm containment. Equipment has since been removed and pad reclaimed.

8:11 Marked 8 pre-planned borehole points distributed inside historical tank battery earthen containment area. Swept sampling areas with magnetic locator prior to ground disturbance.

10:16 Advanced boreholes BH24-01 and BH24-02 inside northwest and southwest corners of historical tank battery containment area, respectively. Samples were collected at 0, 1, 2, 3, and 4 feet bgs.

11:46 Advanced boreholes BH24-03 and BH24-04 inside north and south edges of historical tank battery containment area, respectively. Refusal due to caliche was encountered at 3 feet bgs at both borehole locations. Samples were collected at 0, 1, 2, and 3 feet bgs (refusal depth).

11:47 Advanced boreholes BH24-05 and BH24-06 inside north and south edges of historical tank battery containment area, respectively. Samples were collected at 0, 1, 2, 3, and 4 feet bgs.

18:57 Field screening and DSS finished at office due to thunderstorm. See DSS for field screening results.

Next Steps & Recommendations

1 Continue characterization.

Daily Site Visit Report

Site Photos

Viewing Direction: Northwest	**Viewing Direction**: Southeast
	
Southeast of dry hole marker facing northwest.	South side of reclaimed pad facing southeast. Advanced BH24-01 within approximate northwest corner of historical battery containment.

Daily Site Visit Report

Viewing Direction: Northeast	**Viewing Direction**: Southwest
	
South edge of reclaimed pad facing northeast. Advanced BH24-02 within approximate southwest corner of historical battery containment.	South side of reclaimed pad facing southwest. Advanced BH24-03 east of BH24-01.
Viewing Direction: Northwest	**Viewing Direction**: Southeast
	
South edge of reclaimed pad facing northwest. Advanced BH24-04 east of BH24-02.	South side of reclaimed pad facing southeast. Advanced BH24-05 east of BH24-03.

Daily Site Visit Report

Viewing Direction: North

South edge of reclaimed pad facing north. Advanced BH24-06 east of BH24-04.

Daily Site Visit Report

Daily Site Visit Signature

Inspector: Lakin Pullman

Signature:

Daily Site Visit Report

Client:	Tap Rock	Inspection Date:	7/5/2024
Site Location Name:	Jackson Unit #003	Report Run Date:	7/6/2024 1:24 AM
Client Contact Name:	Bill Ramsey	API #:	
Client Contact Phone #:	720-238-2787		
Unique Project ID		Project Owner:	
Project Reference #		Project Manager:	

Summary of Times

Arrived at Site	7/5/2024 7:34 AM
Departed Site	7/5/2024 3:09 PM

Field Notes

7:49 Completed JSA on arrival. On site to continue characterization of historical release inside unlined earthen tank battery containment on now-reclaimed pad.

7:57 Swept borehole locations with magnetic locator prior to ground disturbance.

9:13 Advanced boreholes BH24-07 and BH24-08 within approximate northeast and southeast corners (respectively) of earthen containment area for former tank battery. Boreholes were advanced to caliche refusal at 4 feet bgs and samples were collected at 0, 1, 2, 3, and 4 feet bgs.

10:18 Increased depth of BH24-02 due to TPH response observed in samples the previous day. Samples were collected at 5 and 6 feet bgs. Refusal depth of borehole was 6 feet bgs and due to hard/rocky caliche.

10:16 Increased depth of BH24-05 due to TPH response observed in samples the previous day. Sample was collected at caliche refusal depth of 5 feet bgs.

17:04 Filled in boreholes and marked with flags in the event that additional work is required.

17:04 Filled in boreholes and marked with flags in the event that additional work is required.

17:07 Field screening results for BH24-07 at 4 feet, BH24-02 at 5 and 6 feet, and BH24-05 at 5 feet bgs exceeded NMOCD OCD strictest criteria for TPH. Field screening results are in DSS.

Daily Site Visit Report

Site Photos

Viewing Direction: West	**Viewing Direction**: West
	
East of dry hole marker facing west.	South side of reclaimed pad facing west. Advanced BH24-07 within northeast corner of former battery containment area.

Daily Site Visit Report

Viewing Direction: North

South edge of reclaimed pad facing north. Advanced BH24-08 within southeast corner of former battery containment area.

Viewing Direction: East

South side of reclaimed pad facing east. Increased depth of BH24-02 within southwest corner of former battery containment area.

Viewing Direction: Southwest

South side of reclaimed pad facing southwest. Increased depth of BH24-05 within north edge of former battery containment area.

Viewing Direction: West

South side of reclaimed pad facing west. Filled and marked boreholes prior to departure.

Daily Site Visit Report

Daily Site Visit Signature

Inspector: Lakin Pullman

Signature: 

Attachment 4

Report to:

Chance Dixon

5796 U.S. Hwy 64
Farmington, NM 87401

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

envirotech

Practical Solutions for a Better Tomorrow

Analytical Report

Vertex Resource Services Inc.

Project Name:	Jackson Unit #003
Work Order:	E407052
Job Number:	24015-001
Received:	7/10/2024

Revision: 1

Report Reviewed By:

Walter Hinchman
Laboratory Director
7/11/24

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: 7/11/24

Chance Dixon
3101 Boyd Drive
Carlsbad, NM 88220

Project Name: Jackson Unit #003
Workorder: E407052
Date Received: 7/10/2024 8:30:00AM

Chance Dixon,

Thank you for choosing Envirotech, Inc. as your analytical testing laboratory for the sample(s) received on, 7/10/2024 8:30:00AM, under the Project Name: Jackson Unit #003.

The analytical test results summarized in this report with the Project Name: Jackson Unit #003 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 reguarding 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

Raina Schwanz
Laboratory Administrator
Office: 505-632-1881
rainaschwanz@envirotech-inc.com

Field Offices:

Southern New Mexico Area

Lynn Jarboe
Laboratory Technical Representative
Office: 505-421-LABS(5227)
Cell: 505-320-4759
ljarboe@envirotech-inc.com

Michelle Gonzales
Client Representative
Office: 505-421-LABS(5227)
Cell: 505-947-8222
mgonzales@envirotech-inc.com

Envirotech Web Address: www.envirotech-inc.com

Table of Contents

Table of Contents (continued)

Sample Summary

Vertex Resource Services Inc.	Project Name:	Jackson Unit #003	**Reported:**
3101 Boyd Drive	Project Number:	24015-001	
Carlsbad NM, 88220	Project Manager:	Chance Dixon	07/11/24 13:18

Client Sample ID	Lab Sample ID	Matrix	Sampled	Received	Container
BH24-01 0'	E407052-01A	Soil	07/04/24	07/10/24	Glass Jar, 2 oz.
BH24-01 1'	E407052-02A	Soil	07/04/24	07/10/24	Glass Jar, 2 oz.
BH24-01 2'	E407052-03A	Soil	07/04/24	07/10/24	Glass Jar, 2 oz.
BH24-01 3'	E407052-04A	Soil	07/04/24	07/10/24	Glass Jar, 2 oz.
BH24-01 4'	E407052-05A	Soil	07/04/24	07/10/24	Glass Jar, 2 oz.
BH24-02 0'	E407052-06A	Soil	07/04/24	07/10/24	Glass Jar, 2 oz.
BH24-02 1'	E407052-07A	Soil	07/04/24	07/10/24	Glass Jar, 2 oz.
BH24-02 2'	E407052-08A	Soil	07/04/24	07/10/24	Glass Jar, 2 oz.
BH24-02 3'	E407052-09A	Soil	07/04/24	07/10/24	Glass Jar, 2 oz.
BH24-02 4'	E407052-10A	Soil	07/04/24	07/10/24	Glass Jar, 2 oz.
BH24-03 0'	E407052-11A	Soil	07/04/24	07/10/24	Glass Jar, 2 oz.
BH24-03 1'	E407052-12A	Soil	07/04/24	07/10/24	Glass Jar, 2 oz.
BH24-03 2'	E407052-13A	Soil	07/04/24	07/10/24	Glass Jar, 2 oz.
BH24-03 3'	E407052-14A	Soil	07/04/24	07/10/24	Glass Jar, 2 oz.
BH24-04 0'	E407052-15A	Soil	07/04/24	07/10/24	Glass Jar, 2 oz.
BH24-04 1'	E407052-16A	Soil	07/04/24	07/10/24	Glass Jar, 2 oz.
BH24-04 2'	E407052-17A	Soil	07/04/24	07/10/24	Glass Jar, 2 oz.
BH24-04 3'	E407052-18A	Soil	07/04/24	07/10/24	Glass Jar, 2 oz.
BH24-05 0'	E407052-19A	Soil	07/04/24	07/10/24	Glass Jar, 2 oz.
BH24-05 1'	E407052-20A	Soil	07/04/24	07/10/24	Glass Jar, 2 oz.

Sample Data

Vertex Resource Services Inc.	Project Name:	Jackson Unit #003	
3101 Boyd Drive	Project Number:	24015-001	**Reported:**
Carlsbad NM, 88220	Project Manager:	Chance Dixon	7/11/2024 1:18:27PM

BH24-01 0'

E407052-01

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organics by EPA 8021B	mg/kg	mg/kg	Analyst: BA			Batch: 2428053
Benzene	ND	0.0250	1	07/10/24	07/11/24	
Ethylbenzene	ND	0.0250	1	07/10/24	07/11/24	
Toluene	ND	0.0250	1	07/10/24	07/11/24	
o-Xylene	ND	0.0250	1	07/10/24	07/11/24	
p,m-Xylene	ND	0.0500	1	07/10/24	07/11/24	
Total Xylenes	ND	0.0250	1	07/10/24	07/11/24	
Surrogate: 4-Bromochlorobenzene-PID		*90.1 %*	*70-130*	*07/10/24*	*07/11/24*	
Nonhalogenated Organics by EPA 8015D - GRO	mg/kg	mg/kg	Analyst: BA			Batch: 2428053
Gasoline Range Organics (C6-C10)	ND	20.0	1	07/10/24	07/11/24	
Surrogate: 1-Chloro-4-fluorobenzene-FID		*96.5 %*	*70-130*	*07/10/24*	*07/11/24*	
Nonhalogenated Organics by EPA 8015D - DRO/ORO	mg/kg	mg/kg	Analyst: NV			Batch: 2428049
Diesel Range Organics (C10-C28)	ND	25.0	1	07/10/24	07/10/24	
Oil Range Organics (C28-C36)	ND	50.0	1	07/10/24	07/10/24	
Surrogate: n-Nonane		*93.6 %*	*50-200*	*07/10/24*	*07/10/24*	
Anions by EPA 300.0/9056A	mg/kg	mg/kg	Analyst: DT			Batch: 2428057
Chloride	**42.2**	20.0	1	07/10/24	07/10/24	

Sample Data

Vertex Resource Services Inc.	Project Name:	Jackson Unit #003	
3101 Boyd Drive	Project Number:	24015-001	**Reported:**
Carlsbad NM, 88220	Project Manager:	Chance Dixon	7/11/2024 1:18:27PM

BH24-01 1'

E407052-02

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organics by EPA 8021B	mg/kg	mg/kg	Analyst: BA			Batch: 2428053
Benzene	ND	0.0250	1	07/10/24	07/11/24	
Ethylbenzene	ND	0.0250	1	07/10/24	07/11/24	
Toluene	ND	0.0250	1	07/10/24	07/11/24	
o-Xylene	ND	0.0250	1	07/10/24	07/11/24	
p,m-Xylene	ND	0.0500	1	07/10/24	07/11/24	
Total Xylenes	ND	0.0250	1	07/10/24	07/11/24	
Surrogate: 4-Bromochlorobenzene-PID		*91.5 %*	*70-130*	*07/10/24*	*07/11/24*	
Nonhalogenated Organics by EPA 8015D - GRO	mg/kg	mg/kg	Analyst: BA			Batch: 2428053
Gasoline Range Organics (C6-C10)	ND	20.0	1	07/10/24	07/11/24	
Surrogate: 1-Chloro-4-fluorobenzene-FID		*96.3 %*	*70-130*	*07/10/24*	*07/11/24*	
Nonhalogenated Organics by EPA 8015D - DRO/ORO	mg/kg	mg/kg	Analyst: NV			Batch: 2428049
Diesel Range Organics (C10-C28)	ND	25.0	1	07/10/24	07/10/24	
Oil Range Organics (C28-C36)	ND	50.0	1	07/10/24	07/10/24	
Surrogate: n-Nonane		*93.4 %*	*50-200*	*07/10/24*	*07/10/24*	
Anions by EPA 300.0/9056A	mg/kg	mg/kg	Analyst: DT			Batch: 2428057
Chloride	ND	20.0	1	07/10/24	07/10/24	

Sample Data

Vertex Resource Services Inc.	Project Name:	Jackson Unit #003	
3101 Boyd Drive	Project Number:	24015-001	**Reported:**
Carlsbad NM, 88220	Project Manager:	Chance Dixon	7/11/2024 1:18:27PM

BH24-01 2'

E407052-03

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organics by EPA 8021B	mg/kg	mg/kg	Analyst: BA			Batch: 2428053
Benzene	ND	0.0250	1	07/10/24	07/11/24	
Ethylbenzene	ND	0.0250	1	07/10/24	07/11/24	
Toluene	ND	0.0250	1	07/10/24	07/11/24	
o-Xylene	ND	0.0250	1	07/10/24	07/11/24	
p,m-Xylene	ND	0.0500	1	07/10/24	07/11/24	
Total Xylenes	ND	0.0250	1	07/10/24	07/11/24	
Surrogate: 4-Bromochlorobenzene-PID		*92.0 %*	*70-130*	*07/10/24*	*07/11/24*	
Nonhalogenated Organics by EPA 8015D - GRO	mg/kg	mg/kg	Analyst: BA			Batch: 2428053
Gasoline Range Organics (C6-C10)	ND	20.0	1	07/10/24	07/11/24	
Surrogate: 1-Chloro-4-fluorobenzene-FID		*95.6 %*	*70-130*	*07/10/24*	*07/11/24*	
Nonhalogenated Organics by EPA 8015D - DRO/ORO	mg/kg	mg/kg	Analyst: NV			Batch: 2428049
Diesel Range Organics (C10-C28)	ND	25.0	1	07/10/24	07/10/24	
Oil Range Organics (C28-C36)	ND	50.0	1	07/10/24	07/10/24	
Surrogate: n-Nonane		*88.6 %*	*50-200*	*07/10/24*	*07/10/24*	
Anions by EPA 300.0/9056A	mg/kg	mg/kg	Analyst: DT			Batch: 2428057
Chloride	ND	20.0	1	07/10/24	07/10/24	

Sample Data

Vertex Resource Services Inc.	Project Name:	Jackson Unit #003	
3101 Boyd Drive	Project Number:	24015-001	**Reported:**
Carlsbad NM, 88220	Project Manager:	Chance Dixon	7/11/2024 1:18:27PM

BH24-01 3'

E407052-04

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organics by EPA 8021B	mg/kg	mg/kg	Analyst: BA			Batch: 2428053
Benzene	ND	0.0250	1	07/10/24	07/11/24	
Ethylbenzene	ND	0.0250	1	07/10/24	07/11/24	
Toluene	ND	0.0250	1	07/10/24	07/11/24	
o-Xylene	ND	0.0250	1	07/10/24	07/11/24	
p,m-Xylene	ND	0.0500	1	07/10/24	07/11/24	
Total Xylenes	ND	0.0250	1	07/10/24	07/11/24	
Surrogate: 4-Bromochlorobenzene-PID		*92.5 %*	*70-130*	*07/10/24*	*07/11/24*	
Nonhalogenated Organics by EPA 8015D - GRO	mg/kg	mg/kg	Analyst: BA			Batch: 2428053
Gasoline Range Organics (C6-C10)	ND	20.0	1	07/10/24	07/11/24	
Surrogate: 1-Chloro-4-fluorobenzene-FID		*95.5 %*	*70-130*	*07/10/24*	*07/11/24*	
Nonhalogenated Organics by EPA 8015D - DRO/ORO	mg/kg	mg/kg	Analyst: NV			Batch: 2428049
Diesel Range Organics (C10-C28)	ND	25.0	1	07/10/24	07/10/24	
Oil Range Organics (C28-C36)	ND	50.0	1	07/10/24	07/10/24	
Surrogate: n-Nonane		*95.6 %*	*50-200*	*07/10/24*	*07/10/24*	
Anions by EPA 300.0/9056A	mg/kg	mg/kg	Analyst: DT			Batch: 2428057
Chloride	ND	20.0	1	07/10/24	07/10/24	

Sample Data

Vertex Resource Services Inc.	Project Name:	Jackson Unit #003	
3101 Boyd Drive	Project Number:	24015-001	**Reported:**
Carlsbad NM, 88220	Project Manager:	Chance Dixon	7/11/2024 1:18:27PM

BH24-01 4'

E407052-05

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organics by EPA 8021B	mg/kg	mg/kg	Analyst: BA			Batch: 2428053
Benzene	ND	0.0250	1	07/10/24	07/11/24	
Ethylbenzene	ND	0.0250	1	07/10/24	07/11/24	
Toluene	ND	0.0250	1	07/10/24	07/11/24	
o-Xylene	ND	0.0250	1	07/10/24	07/11/24	
p,m-Xylene	ND	0.0500	1	07/10/24	07/11/24	
Total Xylenes	ND	0.0250	1	07/10/24	07/11/24	
Surrogate: 4-Bromochlorobenzene-PID		*92.4 %*	*70-130*	*07/10/24*	*07/11/24*	
Nonhalogenated Organics by EPA 8015D - GRO	mg/kg	mg/kg	Analyst: BA			Batch: 2428053
Gasoline Range Organics (C6-C10)	ND	20.0	1	07/10/24	07/11/24	
Surrogate: 1-Chloro-4-fluorobenzene-FID		*95.6 %*	*70-130*	*07/10/24*	*07/11/24*	
Nonhalogenated Organics by EPA 8015D - DRO/ORO	mg/kg	mg/kg	Analyst: NV			Batch: 2428049
Diesel Range Organics (C10-C28)	ND	25.0	1	07/10/24	07/10/24	
Oil Range Organics (C28-C36)	ND	50.0	1	07/10/24	07/10/24	
Surrogate: n-Nonane		*97.7 %*	*50-200*	*07/10/24*	*07/10/24*	
Anions by EPA 300.0/9056A	mg/kg	mg/kg	Analyst: DT			Batch: 2428057
Chloride	ND	20.0	1	07/10/24	07/10/24	

Sample Data

Vertex Resource Services Inc.	Project Name:	Jackson Unit #003	
3101 Boyd Drive	Project Number:	24015-001	**Reported:**
Carlsbad NM, 88220	Project Manager:	Chance Dixon	7/11/2024 1:18:27PM

BH24-02 0'

E407052-06

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organics by EPA 8021B	mg/kg	mg/kg	Analyst: BA			Batch: 2428053
Benzene	ND	0.0250	1	07/10/24	07/11/24	
Ethylbenzene	ND	0.0250	1	07/10/24	07/11/24	
Toluene	ND	0.0250	1	07/10/24	07/11/24	
o-Xylene	ND	0.0250	1	07/10/24	07/11/24	
p,m-Xylene	ND	0.0500	1	07/10/24	07/11/24	
Total Xylenes	ND	0.0250	1	07/10/24	07/11/24	
Surrogate: 4-Bromochlorobenzene-PID		*91.6 %*	*70-130*	*07/10/24*	*07/11/24*	
Nonhalogenated Organics by EPA 8015D - GRO	mg/kg	mg/kg	Analyst: BA			Batch: 2428053
Gasoline Range Organics (C6-C10)	ND	20.0	1	07/10/24	07/11/24	
Surrogate: 1-Chloro-4-fluorobenzene-FID		*95.3 %*	*70-130*	*07/10/24*	*07/11/24*	
Nonhalogenated Organics by EPA 8015D - DRO/ORO	mg/kg	mg/kg	Analyst: NV			Batch: 2428049
Diesel Range Organics (C10-C28)	ND	25.0	1	07/10/24	07/10/24	
Oil Range Organics (C28-C36)	ND	50.0	1	07/10/24	07/10/24	
Surrogate: n-Nonane		*96.2 %*	*50-200*	*07/10/24*	*07/10/24*	
Anions by EPA 300.0/9056A	mg/kg	mg/kg	Analyst: DT			Batch: 2428057
Chloride	ND	20.0	1	07/10/24	07/10/24	

Sample Data

Vertex Resource Services Inc.	Project Name:	Jackson Unit #003	
3101 Boyd Drive	Project Number:	24015-001	**Reported:**
Carlsbad NM, 88220	Project Manager:	Chance Dixon	7/11/2024 1:18:27PM

BH24-02 1'

E407052-07

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organics by EPA 8021B	mg/kg	mg/kg	Analyst: BA			Batch: 2428053
Benzene	ND	0.0250	1	07/10/24	07/11/24	
Ethylbenzene	ND	0.0250	1	07/10/24	07/11/24	
Toluene	ND	0.0250	1	07/10/24	07/11/24	
o-Xylene	ND	0.0250	1	07/10/24	07/11/24	
p,m-Xylene	ND	0.0500	1	07/10/24	07/11/24	
Total Xylenes	ND	0.0250	1	07/10/24	07/11/24	
Surrogate: 4-Bromochlorobenzene-PID		*91.7 %*	*70-130*	*07/10/24*	*07/11/24*	
Nonhalogenated Organics by EPA 8015D - GRO	mg/kg	mg/kg	Analyst: BA			Batch: 2428053
Gasoline Range Organics (C6-C10)	ND	20.0	1	07/10/24	07/11/24	
Surrogate: 1-Chloro-4-fluorobenzene-FID		*96.6 %*	*70-130*	*07/10/24*	*07/11/24*	
Nonhalogenated Organics by EPA 8015D - DRO/ORO	mg/kg	mg/kg	Analyst: NV			Batch: 2428049
Diesel Range Organics (C10-C28)	ND	25.0	1	07/10/24	07/10/24	
Oil Range Organics (C28-C36)	ND	50.0	1	07/10/24	07/10/24	
Surrogate: n-Nonane		*95.8 %*	*50-200*	*07/10/24*	*07/10/24*	
Anions by EPA 300.0/9056A	mg/kg	mg/kg	Analyst: DT			Batch: 2428057
Chloride	ND	20.0	1	07/10/24	07/10/24	

Sample Data

Vertex Resource Services Inc.	Project Name:	Jackson Unit #003	
3101 Boyd Drive	Project Number:	24015-001	**Reported:**
Carlsbad NM, 88220	Project Manager:	Chance Dixon	7/11/2024 1:18:27PM

BH24-02 2'

E407052-08

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organics by EPA 8021B	mg/kg	mg/kg	Analyst: BA			Batch: 2428053
Benzene	ND	0.0250	1	07/10/24	07/10/24	
Ethylbenzene	ND	0.0250	1	07/10/24	07/10/24	
Toluene	ND	0.0250	1	07/10/24	07/10/24	
o-Xylene	ND	0.0250	1	07/10/24	07/10/24	
p,m-Xylene	ND	0.0500	1	07/10/24	07/10/24	
Total Xylenes	ND	0.0250	1	07/10/24	07/10/24	
Surrogate: 4-Bromochlorobenzene-PID		*91.5 %*	*70-130*	*07/10/24*	*07/10/24*	
Nonhalogenated Organics by EPA 8015D - GRO	mg/kg	mg/kg	Analyst: BA			Batch: 2428053
Gasoline Range Organics (C6-C10)	ND	20.0	1	07/10/24	07/10/24	
Surrogate: 1-Chloro-4-fluorobenzene-FID		*94.3 %*	*70-130*	*07/10/24*	*07/10/24*	
Nonhalogenated Organics by EPA 8015D - DRO/ORO	mg/kg	mg/kg	Analyst: NV			Batch: 2428049
Diesel Range Organics (C10-C28)	**45.7**	25.0	1	07/10/24	07/10/24	
Oil Range Organics (C28-C36)	ND	50.0	1	07/10/24	07/10/24	
Surrogate: n-Nonane		*93.3 %*	*50-200*	*07/10/24*	*07/10/24*	
Anions by EPA 300.0/9056A	mg/kg	mg/kg	Analyst: DT			Batch: 2428057
Chloride	ND	20.0	1	07/10/24	07/10/24	

Sample Data

Vertex Resource Services Inc.	Project Name:	Jackson Unit #003	
3101 Boyd Drive	Project Number:	24015-001	**Reported:**
Carlsbad NM, 88220	Project Manager:	Chance Dixon	7/11/2024 1:18:27PM

BH24-02 3'

E407052-09

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organics by EPA 8021B	mg/kg	mg/kg	Analyst: BA			Batch: 2428053
Benzene	ND	0.0250	1	07/10/24	07/11/24	
Ethylbenzene	ND	0.0250	1	07/10/24	07/11/24	
Toluene	ND	0.0250	1	07/10/24	07/11/24	
o-Xylene	ND	0.0250	1	07/10/24	07/11/24	
p,m-Xylene	ND	0.0500	1	07/10/24	07/11/24	
Total Xylenes	ND	0.0250	1	07/10/24	07/11/24	
Surrogate: 4-Bromochlorobenzene-PID		*92.3 %*	*70-130*	*07/10/24*	*07/11/24*	
Nonhalogenated Organics by EPA 8015D - GRO	mg/kg	mg/kg	Analyst: BA			Batch: 2428053
Gasoline Range Organics (C6-C10)	ND	20.0	1	07/10/24	07/11/24	
Surrogate: 1-Chloro-4-fluorobenzene-FID		*95.3 %*	*70-130*	*07/10/24*	*07/11/24*	
Nonhalogenated Organics by EPA 8015D - DRO/ORO	mg/kg	mg/kg	Analyst: NV			Batch: 2428049
Diesel Range Organics (C10-C28)	**169**	25.0	1	07/10/24	07/10/24	
Oil Range Organics (C28-C36)	**79.2**	50.0	1	07/10/24	07/10/24	
Surrogate: n-Nonane		*95.3 %*	*50-200*	*07/10/24*	*07/10/24*	
Anions by EPA 300.0/9056A	mg/kg	mg/kg	Analyst: DT			Batch: 2428057
Chloride	ND	20.0	1	07/10/24	07/10/24	

Sample Data

Vertex Resource Services Inc.	Project Name:	Jackson Unit #003	
3101 Boyd Drive	Project Number:	24015-001	**Reported:**
Carlsbad NM, 88220	Project Manager:	Chance Dixon	7/11/2024 1:18:27PM

BH24-02 4'

E407052-10

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organics by EPA 8021B	mg/kg	mg/kg	Analyst: BA			Batch: 2428053
Benzene	ND	0.0250	1	07/10/24	07/11/24	
Ethylbenzene	ND	0.0250	1	07/10/24	07/11/24	
Toluene	ND	0.0250	1	07/10/24	07/11/24	
o-Xylene	ND	0.0250	1	07/10/24	07/11/24	
p,m-Xylene	ND	0.0500	1	07/10/24	07/11/24	
Total Xylenes	ND	0.0250	1	07/10/24	07/11/24	
Surrogate: 4-Bromochlorobenzene-PID		*92.1 %*	*70-130*	*07/10/24*	*07/11/24*	
Nonhalogenated Organics by EPA 8015D - GRO	mg/kg	mg/kg	Analyst: BA			Batch: 2428053
Gasoline Range Organics (C6-C10)	ND	20.0	1	07/10/24	07/11/24	
Surrogate: 1-Chloro-4-fluorobenzene-FID		*96.4 %*	*70-130*	*07/10/24*	*07/11/24*	
Nonhalogenated Organics by EPA 8015D - DRO/ORO	mg/kg	mg/kg	Analyst: NV			Batch: 2428049
Diesel Range Organics (C10-C28)	**321**	25.0	1	07/10/24	07/10/24	
Oil Range Organics (C28-C36)	**116**	50.0	1	07/10/24	07/10/24	
Surrogate: n-Nonane		*99.7 %*	*50-200*	*07/10/24*	*07/10/24*	
Anions by EPA 300.0/9056A	mg/kg	mg/kg	Analyst: DT			Batch: 2428057
Chloride	ND	20.0	1	07/10/24	07/10/24	

Sample Data

Vertex Resource Services Inc.	Project Name:	Jackson Unit #003	
3101 Boyd Drive	Project Number:	24015-001	**Reported:**
Carlsbad NM, 88220	Project Manager:	Chance Dixon	7/11/2024 1:18:27PM

BH24-03 0'

E407052-11

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organics by EPA 8021B	mg/kg	mg/kg	Analyst: BA			Batch: 2428053
Benzene	ND	0.0250	1	07/10/24	07/11/24	
Ethylbenzene	ND	0.0250	1	07/10/24	07/11/24	
Toluene	ND	0.0250	1	07/10/24	07/11/24	
o-Xylene	ND	0.0250	1	07/10/24	07/11/24	
p,m-Xylene	ND	0.0500	1	07/10/24	07/11/24	
Total Xylenes	ND	0.0250	1	07/10/24	07/11/24	
Surrogate: 4-Bromochlorobenzene-PID		*92.7 %*	*70-130*	*07/10/24*	*07/11/24*	
Nonhalogenated Organics by EPA 8015D - GRO	mg/kg	mg/kg	Analyst: BA			Batch: 2428053
Gasoline Range Organics (C6-C10)	ND	20.0	1	07/10/24	07/11/24	
Surrogate: 1-Chloro-4-fluorobenzene-FID		*96.1 %*	*70-130*	*07/10/24*	*07/11/24*	
Nonhalogenated Organics by EPA 8015D - DRO/ORO	mg/kg	mg/kg	Analyst: NV			Batch: 2428049
Diesel Range Organics (C10-C28)	ND	25.0	1	07/10/24	07/10/24	
Oil Range Organics (C28-C36)	ND	50.0	1	07/10/24	07/10/24	
Surrogate: n-Nonane		*100 %*	*50-200*	*07/10/24*	*07/10/24*	
Anions by EPA 300.0/9056A	mg/kg	mg/kg	Analyst: DT			Batch: 2428057
Chloride	ND	20.0	1	07/10/24	07/10/24	

Sample Data

Vertex Resource Services Inc.	Project Name:	Jackson Unit #003	
3101 Boyd Drive	Project Number:	24015-001	**Reported:**
Carlsbad NM, 88220	Project Manager:	Chance Dixon	7/11/2024 1:18:27PM

BH24-03 1'

E407052-12

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organics by EPA 8021B	mg/kg	mg/kg	Analyst: BA			Batch: 2428053
Benzene	ND	0.0250	1	07/10/24	07/11/24	
Ethylbenzene	ND	0.0250	1	07/10/24	07/11/24	
Toluene	ND	0.0250	1	07/10/24	07/11/24	
o-Xylene	ND	0.0250	1	07/10/24	07/11/24	
p,m-Xylene	ND	0.0500	1	07/10/24	07/11/24	
Total Xylenes	ND	0.0250	1	07/10/24	07/11/24	
Surrogate: 4-Bromochlorobenzene-PID		*92.7 %*	*70-130*	*07/10/24*	*07/11/24*	
Nonhalogenated Organics by EPA 8015D - GRO	mg/kg	mg/kg	Analyst: BA			Batch: 2428053
Gasoline Range Organics (C6-C10)	ND	20.0	1	07/10/24	07/11/24	
Surrogate: 1-Chloro-4-fluorobenzene-FID		*96.7 %*	*70-130*	*07/10/24*	*07/11/24*	
Nonhalogenated Organics by EPA 8015D - DRO/ORO	mg/kg	mg/kg	Analyst: NV			Batch: 2428049
Diesel Range Organics (C10-C28)	ND	25.0	1	07/10/24	07/10/24	
Oil Range Organics (C28-C36)	ND	50.0	1	07/10/24	07/10/24	
Surrogate: n-Nonane		*102 %*	*50-200*	*07/10/24*	*07/10/24*	
Anions by EPA 300.0/9056A	mg/kg	mg/kg	Analyst: DT			Batch: 2428057
Chloride	ND	20.0	1	07/10/24	07/10/24	

Sample Data

Vertex Resource Services Inc.	Project Name:	Jackson Unit #003	
3101 Boyd Drive	Project Number:	24015-001	**Reported:**
Carlsbad NM, 88220	Project Manager:	Chance Dixon	7/11/2024 1:18:27PM

BH24-03 2'

E407052-13

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organics by EPA 8021B	mg/kg	mg/kg	Analyst: BA			Batch: 2428053
Benzene	ND	0.0250	1	07/10/24	07/11/24	
Ethylbenzene	ND	0.0250	1	07/10/24	07/11/24	
Toluene	ND	0.0250	1	07/10/24	07/11/24	
o-Xylene	ND	0.0250	1	07/10/24	07/11/24	
p,m-Xylene	ND	0.0500	1	07/10/24	07/11/24	
Total Xylenes	ND	0.0250	1	07/10/24	07/11/24	
Surrogate: 4-Bromochlorobenzene-PID		*92.5 %*	*70-130*	*07/10/24*	*07/11/24*	
Nonhalogenated Organics by EPA 8015D - GRO	mg/kg	mg/kg	Analyst: BA			Batch: 2428053
Gasoline Range Organics (C6-C10)	ND	20.0	1	07/10/24	07/11/24	
Surrogate: 1-Chloro-4-fluorobenzene-FID		*95.6 %*	*70-130*	*07/10/24*	*07/11/24*	
Nonhalogenated Organics by EPA 8015D - DRO/ORO	mg/kg	mg/kg	Analyst: NV			Batch: 2428049
Diesel Range Organics (C10-C28)	ND	25.0	1	07/10/24	07/11/24	
Oil Range Organics (C28-C36)	ND	50.0	1	07/10/24	07/11/24	
Surrogate: n-Nonane		*92.9 %*	*50-200*	*07/10/24*	*07/11/24*	
Anions by EPA 300.0/9056A	mg/kg	mg/kg	Analyst: DT			Batch: 2428057
Chloride	ND	20.0	1	07/10/24	07/10/24	

Sample Data

Vertex Resource Services Inc.	Project Name:	Jackson Unit #003	
3101 Boyd Drive	Project Number:	24015-001	**Reported:**
Carlsbad NM, 88220	Project Manager:	Chance Dixon	7/11/2024 1:18:27PM

BH24-03 3'

E407052-14

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organics by EPA 8021B	mg/kg	mg/kg	Analyst: BA			Batch: 2428053
Benzene	ND	0.0250	1	07/10/24	07/11/24	
Ethylbenzene	ND	0.0250	1	07/10/24	07/11/24	
Toluene	ND	0.0250	1	07/10/24	07/11/24	
o-Xylene	ND	0.0250	1	07/10/24	07/11/24	
p,m-Xylene	ND	0.0500	1	07/10/24	07/11/24	
Total Xylenes	ND	0.0250	1	07/10/24	07/11/24	
Surrogate: 4-Bromochlorobenzene-PID		*92.7 %*	*70-130*	*07/10/24*	*07/11/24*	
Nonhalogenated Organics by EPA 8015D - GRO	mg/kg	mg/kg	Analyst: BA			Batch: 2428053
Gasoline Range Organics (C6-C10)	ND	20.0	1	07/10/24	07/11/24	
Surrogate: 1-Chloro-4-fluorobenzene-FID		*95.9 %*	*70-130*	*07/10/24*	*07/11/24*	
Nonhalogenated Organics by EPA 8015D - DRO/ORO	mg/kg	mg/kg	Analyst: NV			Batch: 2428049
Diesel Range Organics (C10-C28)	ND	25.0	1	07/10/24	07/11/24	
Oil Range Organics (C28-C36)	ND	50.0	1	07/10/24	07/11/24	
Surrogate: n-Nonane		*87.6 %*	*50-200*	*07/10/24*	*07/11/24*	
Anions by EPA 300.0/9056A	mg/kg	mg/kg	Analyst: DT			Batch: 2428057
Chloride	ND	20.0	1	07/10/24	07/10/24	

Sample Data

Vertex Resource Services Inc.	Project Name:	Jackson Unit #003	
3101 Boyd Drive	Project Number:	24015-001	**Reported:**
Carlsbad NM, 88220	Project Manager:	Chance Dixon	7/11/2024 1:18:27PM

BH24-04 0'

E407052-15

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organics by EPA 8021B	mg/kg	mg/kg	Analyst: BA			Batch: 2428053
Benzene	ND	0.0250	1	07/10/24	07/11/24	
Ethylbenzene	ND	0.0250	1	07/10/24	07/11/24	
Toluene	ND	0.0250	1	07/10/24	07/11/24	
o-Xylene	ND	0.0250	1	07/10/24	07/11/24	
p,m-Xylene	ND	0.0500	1	07/10/24	07/11/24	
Total Xylenes	ND	0.0250	1	07/10/24	07/11/24	
Surrogate: 4-Bromochlorobenzene-PID		*92.8 %*	*70-130*	*07/10/24*	*07/11/24*	
Nonhalogenated Organics by EPA 8015D - GRO	mg/kg	mg/kg	Analyst: BA			Batch: 2428053
Gasoline Range Organics (C6-C10)	ND	20.0	1	07/10/24	07/11/24	
Surrogate: 1-Chloro-4-fluorobenzene-FID		*95.3 %*	*70-130*	*07/10/24*	*07/11/24*	
Nonhalogenated Organics by EPA 8015D - DRO/ORO	mg/kg	mg/kg	Analyst: NV			Batch: 2428049
Diesel Range Organics (C10-C28)	ND	25.0	1	07/10/24	07/11/24	
Oil Range Organics (C28-C36)	ND	50.0	1	07/10/24	07/11/24	
Surrogate: n-Nonane		*98.2 %*	*50-200*	*07/10/24*	*07/11/24*	
Anions by EPA 300.0/9056A	mg/kg	mg/kg	Analyst: DT			Batch: 2428057
Chloride	ND	20.0	1	07/10/24	07/10/24	

Sample Data

Vertex Resource Services Inc.	Project Name:	Jackson Unit #003	
3101 Boyd Drive	Project Number:	24015-001	**Reported:**
Carlsbad NM, 88220	Project Manager:	Chance Dixon	7/11/2024 1:18:27PM

BH24-04 1'

E407052-16

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organics by EPA 8021B	mg/kg	mg/kg	Analyst: BA			Batch: 2428053
Benzene	ND	0.0250	1	07/10/24	07/11/24	
Ethylbenzene	ND	0.0250	1	07/10/24	07/11/24	
Toluene	ND	0.0250	1	07/10/24	07/11/24	
o-Xylene	ND	0.0250	1	07/10/24	07/11/24	
p,m-Xylene	ND	0.0500	1	07/10/24	07/11/24	
Total Xylenes	ND	0.0250	1	07/10/24	07/11/24	
Surrogate: 4-Bromochlorobenzene-PID		*93.1 %*	*70-130*	*07/10/24*	*07/11/24*	
Nonhalogenated Organics by EPA 8015D - GRO	mg/kg	mg/kg	Analyst: BA			Batch: 2428053
Gasoline Range Organics (C6-C10)	ND	20.0	1	07/10/24	07/11/24	
Surrogate: 1-Chloro-4-fluorobenzene-FID		*96.9 %*	*70-130*	*07/10/24*	*07/11/24*	
Nonhalogenated Organics by EPA 8015D - DRO/ORO	mg/kg	mg/kg	Analyst: NV			Batch: 2428049
Diesel Range Organics (C10-C28)	ND	25.0	1	07/10/24	07/11/24	
Oil Range Organics (C28-C36)	ND	50.0	1	07/10/24	07/11/24	
Surrogate: n-Nonane		*94.5 %*	*50-200*	*07/10/24*	*07/11/24*	
Anions by EPA 300.0/9056A	mg/kg	mg/kg	Analyst: DT			Batch: 2428057
Chloride	ND	20.0	1	07/10/24	07/10/24	

Sample Data

Vertex Resource Services Inc.	Project Name:	Jackson Unit #003	
3101 Boyd Drive	Project Number:	24015-001	**Reported:**
Carlsbad NM, 88220	Project Manager:	Chance Dixon	7/11/2024 1:18:27PM

BH24-04 2'

E407052-17

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organics by EPA 8021B	mg/kg	mg/kg	Analyst: BA			Batch: 2428053
Benzene	ND	0.0250	1	07/10/24	07/11/24	
Ethylbenzene	ND	0.0250	1	07/10/24	07/11/24	
Toluene	ND	0.0250	1	07/10/24	07/11/24	
o-Xylene	ND	0.0250	1	07/10/24	07/11/24	
p,m-Xylene	ND	0.0500	1	07/10/24	07/11/24	
Total Xylenes	ND	0.0250	1	07/10/24	07/11/24	
Surrogate: 4-Bromochlorobenzene-PID		*92.6 %*	*70-130*	*07/10/24*	*07/11/24*	
Nonhalogenated Organics by EPA 8015D - GRO	mg/kg	mg/kg	Analyst: BA			Batch: 2428053
Gasoline Range Organics (C6-C10)	ND	20.0	1	07/10/24	07/11/24	
Surrogate: 1-Chloro-4-fluorobenzene-FID		*95.1 %*	*70-130*	*07/10/24*	*07/11/24*	
Nonhalogenated Organics by EPA 8015D - DRO/ORO	mg/kg	mg/kg	Analyst: NV			Batch: 2428049
Diesel Range Organics (C10-C28)	ND	25.0	1	07/10/24	07/11/24	
Oil Range Organics (C28-C36)	ND	50.0	1	07/10/24	07/11/24	
Surrogate: n-Nonane		*90.7 %*	*50-200*	*07/10/24*	*07/11/24*	
Anions by EPA 300.0/9056A	mg/kg	mg/kg	Analyst: DT			Batch: 2428057
Chloride	ND	20.0	1	07/10/24	07/10/24	

Sample Data

Vertex Resource Services Inc.	Project Name:	Jackson Unit #003	
3101 Boyd Drive	Project Number:	24015-001	**Reported:**
Carlsbad NM, 88220	Project Manager:	Chance Dixon	7/11/2024 1:18:27PM

BH24-04 3'

E407052-18

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organics by EPA 8021B	mg/kg	mg/kg	Analyst: BA			Batch: 2428053
Benzene	ND	0.0250	1	07/10/24	07/11/24	
Ethylbenzene	ND	0.0250	1	07/10/24	07/11/24	
Toluene	ND	0.0250	1	07/10/24	07/11/24	
o-Xylene	ND	0.0250	1	07/10/24	07/11/24	
p,m-Xylene	ND	0.0500	1	07/10/24	07/11/24	
Total Xylenes	ND	0.0250	1	07/10/24	07/11/24	
Surrogate: 4-Bromochlorobenzene-PID		*93.0 %*	*70-130*	*07/10/24*	*07/11/24*	
Nonhalogenated Organics by EPA 8015D - GRO	mg/kg	mg/kg	Analyst: BA			Batch: 2428053
Gasoline Range Organics (C6-C10)	ND	20.0	1	07/10/24	07/11/24	
Surrogate: 1-Chloro-4-fluorobenzene-FID		*95.6 %*	*70-130*	*07/10/24*	*07/11/24*	
Nonhalogenated Organics by EPA 8015D - DRO/ORO	mg/kg	mg/kg	Analyst: NV			Batch: 2428049
Diesel Range Organics (C10-C28)	ND	25.0	1	07/10/24	07/11/24	
Oil Range Organics (C28-C36)	ND	50.0	1	07/10/24	07/11/24	
Surrogate: n-Nonane		*91.7 %*	*50-200*	*07/10/24*	*07/11/24*	
Anions by EPA 300.0/9056A	mg/kg	mg/kg	Analyst: DT			Batch: 2428057
Chloride	ND	20.0	1	07/10/24	07/10/24	

Sample Data

Vertex Resource Services Inc.	Project Name:	Jackson Unit #003	
3101 Boyd Drive	Project Number:	24015-001	**Reported:**
Carlsbad NM, 88220	Project Manager:	Chance Dixon	7/11/2024 1:18:27PM

BH24-05 0'

E407052-19

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organics by EPA 8021B	mg/kg	mg/kg	Analyst: BA			Batch: 2428053
Benzene	ND	0.0250	1	07/10/24	07/11/24	
Ethylbenzene	ND	0.0250	1	07/10/24	07/11/24	
Toluene	ND	0.0250	1	07/10/24	07/11/24	
o-Xylene	ND	0.0250	1	07/10/24	07/11/24	
p,m-Xylene	ND	0.0500	1	07/10/24	07/11/24	
Total Xylenes	ND	0.0250	1	07/10/24	07/11/24	
Surrogate: 4-Bromochlorobenzene-PID		*91.8 %*	*70-130*	*07/10/24*	*07/11/24*	
Nonhalogenated Organics by EPA 8015D - GRO	mg/kg	mg/kg	Analyst: BA			Batch: 2428053
Gasoline Range Organics (C6-C10)	ND	20.0	1	07/10/24	07/11/24	
Surrogate: 1-Chloro-4-fluorobenzene-FID		*95.0 %*	*70-130*	*07/10/24*	*07/11/24*	
Nonhalogenated Organics by EPA 8015D - DRO/ORO	mg/kg	mg/kg	Analyst: NV			Batch: 2428049
Diesel Range Organics (C10-C28)	ND	25.0	1	07/10/24	07/11/24	
Oil Range Organics (C28-C36)	ND	50.0	1	07/10/24	07/11/24	
Surrogate: n-Nonane		*97.3 %*	*50-200*	*07/10/24*	*07/11/24*	
Anions by EPA 300.0/9056A	mg/kg	mg/kg	Analyst: DT			Batch: 2428057
Chloride	ND	20.0	1	07/10/24	07/10/24	

Sample Data

Vertex Resource Services Inc.	Project Name:	Jackson Unit #003	
3101 Boyd Drive	Project Number:	24015-001	**Reported:**
Carlsbad NM, 88220	Project Manager:	Chance Dixon	7/11/2024 1:18:27PM

BH24-05 1'

E407052-20

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organics by EPA 8021B	mg/kg	mg/kg	Analyst: BA			Batch: 2428053
Benzene	ND	0.0250	1	07/10/24	07/11/24	
Ethylbenzene	ND	0.0250	1	07/10/24	07/11/24	
Toluene	ND	0.0250	1	07/10/24	07/11/24	
o-Xylene	ND	0.0250	1	07/10/24	07/11/24	
p,m-Xylene	ND	0.0500	1	07/10/24	07/11/24	
Total Xylenes	ND	0.0250	1	07/10/24	07/11/24	
Surrogate: 4-Bromochlorobenzene-PID		*89.6 %*	*70-130*	*07/10/24*	*07/11/24*	
Nonhalogenated Organics by EPA 8015D - GRO	mg/kg	mg/kg	Analyst: BA			Batch: 2428053
Gasoline Range Organics (C6-C10)	ND	20.0	1	07/10/24	07/11/24	
Surrogate: 1-Chloro-4-fluorobenzene-FID		*95.5 %*	*70-130*	*07/10/24*	*07/11/24*	
Nonhalogenated Organics by EPA 8015D - DRO/ORO	mg/kg	mg/kg	Analyst: NV			Batch: 2428049
Diesel Range Organics (C10-C28)	ND	25.0	1	07/10/24	07/11/24	
Oil Range Organics (C28-C36)	ND	50.0	1	07/10/24	07/11/24	
Surrogate: n-Nonane		*91.4 %*	*50-200*	*07/10/24*	*07/11/24*	
Anions by EPA 300.0/9056A	mg/kg	mg/kg	Analyst: DT			Batch: 2428057
Chloride	ND	20.0	1	07/10/24	07/10/24	

QC Summary Data

Vertex Resource Services Inc.	Project Name:	Jackson Unit #003	**Reported:**
3101 Boyd Drive	Project Number:	24015-001	
Carlsbad NM, 88220	Project Manager:	Chance Dixon	7/11/2024 1:18:27PM

Volatile Organics by EPA 8021B

Analyst: BA

Analyte	Result	Reporting Limit	Spike Level	Source Result	Rec	Rec Limits	RPD	RPD Limit	Notes
	mg/kg	mg/kg	mg/kg	mg/kg	%	%	%	%	
Blank (2428053-BLK1)									Prepared: 07/10/24 Analyzed: 07/10/24
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	*7.13*		*8.00*		*89.2*	*70-130*			
LCS (2428053-BS1)									Prepared: 07/10/24 Analyzed: 07/10/24
Benzene	4.55	0.0250	5.00		91.0	70-130			
Ethylbenzene	4.38	0.0250	5.00		87.6	70-130			
Toluene	4.48	0.0250	5.00		89.7	70-130			
o-Xylene	4.39	0.0250	5.00		87.8	70-130			
p,m-Xylene	8.91	0.0500	10.0		89.1	70-130			
Total Xylenes	13.3	0.0250	15.0		88.6	70-130			
Surrogate: 4-Bromochlorobenzene-PID	*7.22*		*8.00*		*90.3*	*70-130*			
Matrix Spike (2428053-MS1)				**Source: E407052-08**					Prepared: 07/10/24 Analyzed: 07/10/24
Benzene	4.83	0.0250	5.00	ND	96.6	54-133			
Ethylbenzene	4.64	0.0250	5.00	ND	92.8	61-133			
Toluene	4.75	0.0250	5.00	ND	95.1	61-130			
o-Xylene	4.63	0.0250	5.00	ND	92.6	63-131			
p,m-Xylene	9.41	0.0500	10.0	ND	94.1	63-131			
Total Xylenes	14.0	0.0250	15.0	ND	93.6	63-131			
Surrogate: 4-Bromochlorobenzene-PID	*7.31*		*8.00*		*91.4*	*70-130*			
Matrix Spike Dup (2428053-MSD1)				**Source: E407052-08**					Prepared: 07/10/24 Analyzed: 07/11/24
Benzene	4.73	0.0250	5.00	ND	94.7	54-133	2.07	20	
Ethylbenzene	4.55	0.0250	5.00	ND	91.1	61-133	1.83	20	
Toluene	4.66	0.0250	5.00	ND	93.2	61-130	1.95	20	
o-Xylene	4.54	0.0250	5.00	ND	90.7	63-131	2.01	20	
p,m-Xylene	9.25	0.0500	10.0	ND	92.5	63-131	1.74	20	
Total Xylenes	13.8	0.0250	15.0	ND	91.9	63-131	1.83	20	
Surrogate: 4-Bromochlorobenzene-PID	*7.33*		*8.00*		*91.6*	*70-130*			

QC Summary Data

Vertex Resource Services Inc.	Project Name:	Jackson Unit #003	**Reported:**
3101 Boyd Drive	Project Number:	24015-001	
Carlsbad NM, 88220	Project Manager:	Chance Dixon	7/11/2024 1:18:27PM

Nonhalogenated Organics by EPA 8015D - GRO

Analyst: BA

Analyte	Result	Reporting Limit	Spike Level	Source Result	Rec	Rec Limits	RPD	RPD Limit	Notes
	mg/kg	mg/kg	mg/kg	mg/kg	%	%	%	%	
Blank (2428053-BLK1)									Prepared: 07/10/24 Analyzed: 07/10/24
Gasoline Range Organics (C6-C10)	ND	20.0							
Surrogate: 1-Chloro-4-fluorobenzene-FID	*7.80*		*8.00*		*97.4*	*70-130*			
LCS (2428053-BS2)									Prepared: 07/10/24 Analyzed: 07/10/24
Gasoline Range Organics (C6-C10)	44.7	20.0	50.0		89.3	70-130			
Surrogate: 1-Chloro-4-fluorobenzene-FID	*7.74*		*8.00*		*96.8*	*70-130*			
Matrix Spike (2428053-MS2)				**Source: E407052-08**					Prepared: 07/10/24 Analyzed: 07/11/24
Gasoline Range Organics (C6-C10)	44.6	20.0	50.0	ND	89.1	70-130			
Surrogate: 1-Chloro-4-fluorobenzene-FID	*7.75*		*8.00*		*96.9*	*70-130*			
Matrix Spike Dup (2428053-MSD2)				**Source: E407052-08**					Prepared: 07/10/24 Analyzed: 07/11/24
Gasoline Range Organics (C6-C10)	44.5	20.0	50.0	ND	89.0	70-130	0.111	20	
Surrogate: 1-Chloro-4-fluorobenzene-FID	*7.77*		*8.00*		*97.1*	*70-130*			

QC Summary Data

Vertex Resource Services Inc.	Project Name:	Jackson Unit #003	**Reported:**
3101 Boyd Drive	Project Number:	24015-001	
Carlsbad NM, 88220	Project Manager:	Chance Dixon	7/11/2024 1:18:27PM

Nonhalogenated Organics by EPA 8015D - DRO/ORO

Analyst: NV

Analyte	Result	Reporting Limit	Spike Level	Source Result	Rec	Rec Limits	RPD	RPD Limit	Notes
	mg/kg	mg/kg	mg/kg	mg/kg	%	%	%	%	
Blank (2428049-BLK1)									Prepared: 07/10/24 Analyzed: 07/10/24
Diesel Range Organics (C10-C28)	ND	25.0							
Oil Range Organics (C28-C36)	ND	50.0							
Surrogate: n-Nonane	*52.0*		*50.0*		*104*	*50-200*			
LCS (2428049-BS1)									Prepared: 07/10/24 Analyzed: 07/10/24
Diesel Range Organics (C10-C28)	261	25.0	250		104	38-132			
Surrogate: n-Nonane	*48.7*		*50.0*		*97.4*	*50-200*			
Matrix Spike (2428049-MS1)				**Source: E407052-07**					Prepared: 07/10/24 Analyzed: 07/10/24
Diesel Range Organics (C10-C28)	273	25.0	250	ND	109	38-132			
Surrogate: n-Nonane	*50.7*		*50.0*		*101*	*50-200*			
Matrix Spike Dup (2428049-MSD1)				**Source: E407052-07**					Prepared: 07/10/24 Analyzed: 07/10/24
Diesel Range Organics (C10-C28)	272	25.0	250	ND	109	38-132	0.240	20	
Surrogate: n-Nonane	*51.3*		*50.0*		*103*	*50-200*			

QC Summary Data

Vertex Resource Services Inc.	Project Name:	Jackson Unit #003	**Reported:**
3101 Boyd Drive	Project Number:	24015-001	
Carlsbad NM, 88220	Project Manager:	Chance Dixon	7/11/2024 1:18:27PM

Anions by EPA 300.0/9056A

Analyst: DT

Analyte	Result	Reporting Limit	Spike Level	Source Result	Rec	Rec Limits	RPD	RPD Limit	Notes
	mg/kg	mg/kg	mg/kg	mg/kg	%	%	%	%	
Blank (2428057-BLK1)									Prepared: 07/10/24 Analyzed: 07/10/24
Chloride	ND	20.0							
LCS (2428057-BS1)									Prepared: 07/10/24 Analyzed: 07/10/24
Chloride	256	20.0	250		103	90-110			
Matrix Spike (2428057-MS1)				**Source: E407052-04**					Prepared: 07/10/24 Analyzed: 07/10/24
Chloride	263	20.0	250	ND	105	80-120			
Matrix Spike Dup (2428057-MSD1)				**Source: E407052-04**					Prepared: 07/10/24 Analyzed: 07/10/24
Chloride	263	20.0	250	ND	105	80-120	0.0541	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:	Jackson Unit #003	
3101 Boyd Drive	Project Number:	24015-001	**Reported:**
Carlsbad NM, 88220	Project Manager:	Chance Dixon	07/11/24 13:18

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.

Released to Imaging: 9/3/2024 11:39:55 AM
Received by OCD: 9/3/2024 11:00:09 AM

Chain of Custody

Client Information	Invoice Information	Lab Use Only		TAT				State					
Client: **Vertex (bill direct to Tap Rock)**	Company: **Tap Rock (Bill Ramsay)**	Lab WO#	Job Number	1D	2D	3D	Std	NM	CO	UT	TX		
Project Name: **Jackson Unit #003**	Address:	E 407052	24015-0001		X								
Project Manager: **Chance Dixon**	City, State, Zip:												
Project Number: **24E-03316**	Phone:												
City, State, Zip:	Email:												
Phone:	Miscellaneous: **Direct bill to Tap Rock ATTN: Bill Ramsay.**												
Email: cdixon@vertexresource.com													

Sample Information

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			
14:30	07.04.2024	Soil	1	BH24-01 0'		1	X	X	X		X						
14:30	07.04.2024	Soil	1	BH24-01 1'		2	X	X	X		X						
14:35	07.04.2024	Soil	1	BH24-01 2'		3	X	X	X		X						
14:40	07.04.2024	Soil	1	BH24-01 3'		4	X	X	X		X						
14:45	07.04.2024	Soil	1	BH24-01 4'		5	X	X	X		X						
14:50	07.04.2024	Soil	1	BH24-02 0'		6	X	X	X		X						
14:50	07.04.2024	Soil	1	BH24-02 1'		7	X	X	X		X						
14:55	07.04.2024	Soil	1	BH24-02 2'		8	X	X	X		X						
15:00	07.04.2024	Soil	1	BH24-02 3'		9	X	X	X		X						
15:05	07.04.2024	Soil	1	BH24-02 4'		10	X	X	X		X						

Analysis and Method

EPA Program

SDWA	CWA	RCRA

Compliance Y or N

PWSID #

Remarks

Additional Instructions: Direct bill to Tap Rock ATTN: Bill Ramsay. Please email final report to cdixon@vertexresource.com, permain@vertexresource.com

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: **L. Pullman**

Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time
L. Pullman	7-9-2024	07:00	Michelle Gonzales	7-9-24	0700
Michelle Gonzales	7-9-24	1725		7.9.24	1725
	7.9.24	2345		7-10-24	0830
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 6°C on subsequent days.

Lab Use Only

Received on ice: Ø / 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

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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Released to Imaging: 9/3/2024 11:39:55 AM
Received by OCD: 9/3/2024 11:00:09 AM

Chain of Custody

Client Information	Invoice Information	Lab Use Only		TAT				State				
Client: **Vertex (bill direct to Tap Rock)**	Company: **Tap Rock (Bill Ramsay)**	Lab WO#	Job Number	1D	2D	3D	Std	NM	CO	UT	TX	
Project Name: **Jackson Unit #003**	Address:	E 407052	24015-0001		X							
Project Manager: **Chance Dixon**	City, State, Zip:											
Project Number: **24E-03316**	Phone:											
City, State, Zip:	Email:											
Phone:	Miscellaneous: **Direct bill to Tap Rock ATTN: Bill Ramsay.**											
Email: cdixon@vertexresource.com												

Sample Information

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				Remarks
15:10	07.04.2024	Soil	1	BH24-03 0'		11	X	X	X		X							
15:10	07.04.2024	Soil	1	BH24-03 1'		12	X	X	X		X							
15:15	07.04.2024	Soil	1	BH24-03 2'		13	X	X	X		X							
15:20	07.04.2024	Soil	1	BH24-03 3'		14	X	X	X		X							
15:25	07.04.2024	Soil	1	BH24-04 0'		15	X	X	X		X							
15:25	07.04.2024	Soil	1	BH24-04 1'		16	X	X	X		X							
15:30	07.04.2024	Soil	1	BH24-04 2'		17	X	X	X		X							
15:35	07.04.2024	Soil	1	BH24-04 3'		18	X	X	X		X							
15:40	07.04.2024	Soil	1	BH24-05 0'		19	X	X	X		X							
15:40	07.04.2024	Soil	1	BH24-05 1'		20	X	X	X		X							

Analysis and Method

EPA Program

SDWA	CWA	RCRA

Compliance Y or N

PWSID #

Remarks

Additional Instructions: Direct bill to Tap Rock ATTN: Bill Ramsay. Please email final report to cdixon@vertexresource.com, permain@vertexresource.com

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: **L. Pullman**

Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time
L. Pullman	7-9-2024	07:00	Michelle Gonzales	7-9-24	0700
Michelle Gonzales	7-9-24	1725	L.M.	7.9.24	1725
L.M.	7.9.24	2345		7-10-24	0830
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 6°C 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

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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Envirotech Analytical Laboratory

Printed: 7/10/2024 2:18:52PM

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:	07/10/24 08:30	Work Order ID:	E407052
Phone:	(575) 748-0176	Date Logged In:	07/09/24 17:47	Logged In By:	Alexa Michaels
Email:	cdixon@vertex.ca	Due Date:	07/11/24 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	Carrier: Courier
4. Was the COC complete, i.e., signatures, dates/times, requested analyses?	Yes	
5. Were all samples received within holding time? Note: Analysis, such as pH which should be conducted in the field, i.e, 15 minute hold time, are not included in this disucssion.	Yes	

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

Comments/Resolution

Jackson Unit #003 has been separated into multiple WO due to high sample volume. WO are E407052 and E407053.

Client Instruction

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

Date

envirotech Inc.

Report to:

Chance Dixon

5796 U.S. Hwy 64
Farmington, NM 87401

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

envirotech

Practical Solutions for a Better Tomorrow

Analytical Report

Vertex Resource Services Inc.

Project Name:	Jackson Unit #003
Work Order:	E407053
Job Number:	24015-001
Received:	7/10/2024

Revision: 1

Report Reviewed By:

Walter Hinchman
Laboratory Director
7/11/24

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: 7/11/24

Chance Dixon
3101 Boyd Drive
Carlsbad, NM 88220

Project Name: Jackson Unit #003
Workorder: E407053
Date Received: 7/10/2024 8:30:00AM

Chance Dixon,

Thank you for choosing Envirotech, Inc. as your analytical testing laboratory for the sample(s) received on, 7/10/2024 8:30:00AM, under the Project Name: Jackson Unit #003.

The analytical test results summarized in this report with the Project Name: Jackson Unit #003 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 reguarding 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

Raina Schwanz
Laboratory Administrator
Office: 505-632-1881
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Envirotech Web Address: www.envirotech-inc.com

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Sample Summary

Vertex Resource Services Inc.	Project Name:	Jackson Unit #003	**Reported:**
3101 Boyd Drive	Project Number:	24015-001	
Carlsbad NM, 88220	Project Manager:	Chance Dixon	07/11/24 15:41

Client Sample ID	Lab Sample ID	Matrix	Sampled	Received	Container
BH24-05 2'	E407053-01A	Soil	07/04/24	07/10/24	Glass Jar, 2 oz.
BH24-05 3'	E407053-02A	Soil	07/04/24	07/10/24	Glass Jar, 2 oz.
BH24-05 4'	E407053-03A	Soil	07/04/24	07/10/24	Glass Jar, 2 oz.
BH24-06 0'	E407053-04A	Soil	07/04/24	07/10/24	Glass Jar, 2 oz.
BH24-06 1'	E407053-05A	Soil	07/04/24	07/10/24	Glass Jar, 2 oz.
BH24-06 2'	E407053-06A	Soil	07/04/24	07/10/24	Glass Jar, 2 oz.
BH24-06 3'	E407053-07A	Soil	07/04/24	07/10/24	Glass Jar, 2 oz.
BH24-06 4'	E407053-08A	Soil	07/04/24	07/10/24	Glass Jar, 2 oz.
BH24-07 0'	E407053-09A	Soil	07/05/24	07/10/24	Glass Jar, 2 oz.
BH24-07 1'	E407053-10A	Soil	07/05/24	07/10/24	Glass Jar, 2 oz.
BH24-07 2'	E407053-11A	Soil	07/05/24	07/10/24	Glass Jar, 2 oz.
BH24-07 3'	E407053-12A	Soil	07/05/24	07/10/24	Glass Jar, 2 oz.
BH24-07 4'	E407053-13A	Soil	07/05/24	07/10/24	Glass Jar, 2 oz.
BH24-08 0'	E407053-14A	Soil	07/05/24	07/10/24	Glass Jar, 2 oz.
BH24-08 1'	E407053-15A	Soil	07/05/24	07/10/24	Glass Jar, 2 oz.
BH24-08 2'	E407053-16A	Soil	07/05/24	07/10/24	Glass Jar, 2 oz.
BH24-08 3'	E407053-17A	Soil	07/05/24	07/10/24	Glass Jar, 2 oz.
BH24-08 4'	E407053-18A	Soil	07/05/24	07/10/24	Glass Jar, 2 oz.
BH24-02 5'	E407053-19A	Soil	07/05/24	07/10/24	Glass Jar, 2 oz.
BH24-02 6'	E407053-20A	Soil	07/05/24	07/10/24	Glass Jar, 2 oz.
BH24-05 5'	E407053-21A	Soil	07/05/24	07/10/24	Glass Jar, 2 oz.

Sample Data

Vertex Resource Services Inc.	Project Name:	Jackson Unit #003	
3101 Boyd Drive	Project Number:	24015-001	**Reported:**
Carlsbad NM, 88220	Project Manager:	Chance Dixon	7/11/2024 3:41:06PM

BH24-05 2'

E407053-01

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organic Compounds by EPA 8260B	mg/kg	mg/kg	Analyst: RKS			Batch: 2428054
Benzene	ND	0.0250	1	07/10/24	07/10/24	
Ethylbenzene	ND	0.0250	1	07/10/24	07/10/24	
Toluene	ND	0.0250	1	07/10/24	07/10/24	
o-Xylene	ND	0.0250	1	07/10/24	07/10/24	
p,m-Xylene	ND	0.0500	1	07/10/24	07/10/24	
Total Xylenes	ND	0.0250	1	07/10/24	07/10/24	
Surrogate: Bromofluorobenzene		*106 %*	*70-130*	*07/10/24*	*07/10/24*	
Surrogate: 1,2-Dichloroethane-d4		*91.0 %*	*70-130*	*07/10/24*	*07/10/24*	
Surrogate: Toluene-d8		*102 %*	*70-130*	*07/10/24*	*07/10/24*	
Nonhalogenated Organics by EPA 8015D - GRO	mg/kg	mg/kg	Analyst: RKS			Batch: 2428054
Gasoline Range Organics (C6-C10)	ND	20.0	1	07/10/24	07/10/24	
Surrogate: Bromofluorobenzene		*106 %*	*70-130*	*07/10/24*	*07/10/24*	
Surrogate: 1,2-Dichloroethane-d4		*91.0 %*	*70-130*	*07/10/24*	*07/10/24*	
Surrogate: Toluene-d8		*102 %*	*70-130*	*07/10/24*	*07/10/24*	
Nonhalogenated Organics by EPA 8015D - DRO/ORO	mg/kg	mg/kg	Analyst: KM			Batch: 2428050
Diesel Range Organics (C10-C28)	ND	25.0	1	07/10/24	07/10/24	
Oil Range Organics (C28-C36)	ND	50.0	1	07/10/24	07/10/24	
Surrogate: n-Nonane		*107 %*	*50-200*	*07/10/24*	*07/10/24*	
Anions by EPA 300.0/9056A	mg/kg	mg/kg	Analyst: WF			Batch: 2428058
Chloride	ND	20.0	1	07/10/24	07/10/24	

Sample Data

Vertex Resource Services Inc.	Project Name:	Jackson Unit #003	
3101 Boyd Drive	Project Number:	24015-001	**Reported:**
Carlsbad NM, 88220	Project Manager:	Chance Dixon	7/11/2024 3:41:06PM

BH24-05 3'

E407053-02

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organic Compounds by EPA 8260B	mg/kg	mg/kg	Analyst: RKS			Batch: 2428054
Benzene	ND	0.0250	1	07/10/24	07/10/24	
Ethylbenzene	ND	0.0250	1	07/10/24	07/10/24	
Toluene	ND	0.0250	1	07/10/24	07/10/24	
o-Xylene	ND	0.0250	1	07/10/24	07/10/24	
p,m-Xylene	ND	0.0500	1	07/10/24	07/10/24	
Total Xylenes	ND	0.0250	1	07/10/24	07/10/24	
Surrogate: Bromofluorobenzene		*101 %*	*70-130*	*07/10/24*	*07/10/24*	
Surrogate: 1,2-Dichloroethane-d4		*91.7 %*	*70-130*	*07/10/24*	*07/10/24*	
Surrogate: Toluene-d8		*102 %*	*70-130*	*07/10/24*	*07/10/24*	
Nonhalogenated Organics by EPA 8015D - GRO	mg/kg	mg/kg	Analyst: RKS			Batch: 2428054
Gasoline Range Organics (C6-C10)	ND	20.0	1	07/10/24	07/10/24	
Surrogate: Bromofluorobenzene		*101 %*	*70-130*	*07/10/24*	*07/10/24*	
Surrogate: 1,2-Dichloroethane-d4		*91.7 %*	*70-130*	*07/10/24*	*07/10/24*	
Surrogate: Toluene-d8		*102 %*	*70-130*	*07/10/24*	*07/10/24*	
Nonhalogenated Organics by EPA 8015D - DRO/ORO	mg/kg	mg/kg	Analyst: KM			Batch: 2428050
Diesel Range Organics (C10-C28)	**68.0**	25.0	1	07/10/24	07/10/24	
Oil Range Organics (C28-C36)	**54.7**	50.0	1	07/10/24	07/10/24	
Surrogate: n-Nonane		*105 %*	*50-200*	*07/10/24*	*07/10/24*	
Anions by EPA 300.0/9056A	mg/kg	mg/kg	Analyst: WF			Batch: 2428058
Chloride	ND	20.0	1	07/10/24	07/10/24	

Sample Data

Vertex Resource Services Inc.	Project Name:	Jackson Unit #003	
3101 Boyd Drive	Project Number:	24015-001	**Reported:**
Carlsbad NM, 88220	Project Manager:	Chance Dixon	7/11/2024 3:41:06PM

BH24-05 4'

E407053-03

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organic Compounds by EPA 8260B	mg/kg	mg/kg	Analyst: RKS			Batch: 2428054
Benzene	ND	0.0250	1	07/10/24	07/10/24	
Ethylbenzene	ND	0.0250	1	07/10/24	07/10/24	
Toluene	ND	0.0250	1	07/10/24	07/10/24	
o-Xylene	ND	0.0250	1	07/10/24	07/10/24	
p,m-Xylene	ND	0.0500	1	07/10/24	07/10/24	
Total Xylenes	ND	0.0250	1	07/10/24	07/10/24	
Surrogate: Bromofluorobenzene		*105 %*	*70-130*	*07/10/24*	*07/10/24*	
Surrogate: 1,2-Dichloroethane-d4		*90.3 %*	*70-130*	*07/10/24*	*07/10/24*	
Surrogate: Toluene-d8		*102 %*	*70-130*	*07/10/24*	*07/10/24*	
Nonhalogenated Organics by EPA 8015D - GRO	mg/kg	mg/kg	Analyst: RKS			Batch: 2428054
Gasoline Range Organics (C6-C10)	ND	20.0	1	07/10/24	07/10/24	
Surrogate: Bromofluorobenzene		*105 %*	*70-130*	*07/10/24*	*07/10/24*	
Surrogate: 1,2-Dichloroethane-d4		*90.3 %*	*70-130*	*07/10/24*	*07/10/24*	
Surrogate: Toluene-d8		*102 %*	*70-130*	*07/10/24*	*07/10/24*	
Nonhalogenated Organics by EPA 8015D - DRO/ORO	mg/kg	mg/kg	Analyst: KM			Batch: 2428050
Diesel Range Organics (C10-C28)	**156**	25.0	1	07/10/24	07/10/24	
Oil Range Organics (C28-C36)	**90.6**	50.0	1	07/10/24	07/10/24	
Surrogate: n-Nonane		*116 %*	*50-200*	*07/10/24*	*07/10/24*	
Anions by EPA 300.0/9056A	mg/kg	mg/kg	Analyst: WF			Batch: 2428058
Chloride	ND	20.0	1	07/10/24	07/10/24	

Sample Data

Vertex Resource Services Inc.	Project Name:	Jackson Unit #003	
3101 Boyd Drive	Project Number:	24015-001	**Reported:**
Carlsbad NM, 88220	Project Manager:	Chance Dixon	7/11/2024 3:41:06PM

BH24-06 0'

E407053-04

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organic Compounds by EPA 8260B	mg/kg	mg/kg	Analyst: RKS			Batch: 2428054
Benzene	ND	0.0250	1	07/10/24	07/10/24	
Ethylbenzene	ND	0.0250	1	07/10/24	07/10/24	
Toluene	ND	0.0250	1	07/10/24	07/10/24	
o-Xylene	ND	0.0250	1	07/10/24	07/10/24	
p,m-Xylene	ND	0.0500	1	07/10/24	07/10/24	
Total Xylenes	ND	0.0250	1	07/10/24	07/10/24	
Surrogate: Bromofluorobenzene		*105 %*	*70-130*	*07/10/24*	*07/10/24*	
Surrogate: 1,2-Dichloroethane-d4		*89.2 %*	*70-130*	*07/10/24*	*07/10/24*	
Surrogate: Toluene-d8		*104 %*	*70-130*	*07/10/24*	*07/10/24*	
Nonhalogenated Organics by EPA 8015D - GRO	mg/kg	mg/kg	Analyst: RKS			Batch: 2428054
Gasoline Range Organics (C6-C10)	ND	20.0	1	07/10/24	07/10/24	
Surrogate: Bromofluorobenzene		*105 %*	*70-130*	*07/10/24*	*07/10/24*	
Surrogate: 1,2-Dichloroethane-d4		*89.2 %*	*70-130*	*07/10/24*	*07/10/24*	
Surrogate: Toluene-d8		*104 %*	*70-130*	*07/10/24*	*07/10/24*	
Nonhalogenated Organics by EPA 8015D - DRO/ORO	mg/kg	mg/kg	Analyst: KM			Batch: 2428050
Diesel Range Organics (C10-C28)	ND	25.0	1	07/10/24	07/10/24	
Oil Range Organics (C28-C36)	ND	50.0	1	07/10/24	07/10/24	
Surrogate: n-Nonane		*117 %*	*50-200*	*07/10/24*	*07/10/24*	
Anions by EPA 300.0/9056A	mg/kg	mg/kg	Analyst: WF			Batch: 2428058
Chloride	ND	20.0	1	07/10/24	07/10/24	

Sample Data

Vertex Resource Services Inc.	Project Name:	Jackson Unit #003	
3101 Boyd Drive	Project Number:	24015-001	**Reported:**
Carlsbad NM, 88220	Project Manager:	Chance Dixon	7/11/2024 3:41:06PM

BH24-06 1'

E407053-05

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organic Compounds by EPA 8260B	mg/kg	mg/kg	Analyst: RKS			Batch: 2428054
Benzene	ND	0.0250	1	07/10/24	07/10/24	
Ethylbenzene	ND	0.0250	1	07/10/24	07/10/24	
Toluene	ND	0.0250	1	07/10/24	07/10/24	
o-Xylene	ND	0.0250	1	07/10/24	07/10/24	
p,m-Xylene	ND	0.0500	1	07/10/24	07/10/24	
Total Xylenes	ND	0.0250	1	07/10/24	07/10/24	
Surrogate: Bromofluorobenzene		*106 %*	*70-130*	*07/10/24*	*07/10/24*	
Surrogate: 1,2-Dichloroethane-d4		*86.8 %*	*70-130*	*07/10/24*	*07/10/24*	
Surrogate: Toluene-d8		*104 %*	*70-130*	*07/10/24*	*07/10/24*	
Nonhalogenated Organics by EPA 8015D - GRO	mg/kg	mg/kg	Analyst: RKS			Batch: 2428054
Gasoline Range Organics (C6-C10)	ND	20.0	1	07/10/24	07/10/24	
Surrogate: Bromofluorobenzene		*106 %*	*70-130*	*07/10/24*	*07/10/24*	
Surrogate: 1,2-Dichloroethane-d4		*86.8 %*	*70-130*	*07/10/24*	*07/10/24*	
Surrogate: Toluene-d8		*104 %*	*70-130*	*07/10/24*	*07/10/24*	
Nonhalogenated Organics by EPA 8015D - DRO/ORO	mg/kg	mg/kg	Analyst: KM			Batch: 2428050
Diesel Range Organics (C10-C28)	ND	25.0	1	07/10/24	07/11/24	
Oil Range Organics (C28-C36)	ND	50.0	1	07/10/24	07/11/24	
Surrogate: n-Nonane		*114 %*	*50-200*	*07/10/24*	*07/11/24*	
Anions by EPA 300.0/9056A	mg/kg	mg/kg	Analyst: WF			Batch: 2428058
Chloride	ND	20.0	1	07/10/24	07/10/24	

Sample Data

Vertex Resource Services Inc.	Project Name:	Jackson Unit #003	
3101 Boyd Drive	Project Number:	24015-001	**Reported:**
Carlsbad NM, 88220	Project Manager:	Chance Dixon	7/11/2024 3:41:06PM

BH24-06 2'

E407053-06

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organic Compounds by EPA 8260B	mg/kg	mg/kg	Analyst: RKS			Batch: 2428054
Benzene	ND	0.0250	1	07/10/24	07/10/24	
Ethylbenzene	ND	0.0250	1	07/10/24	07/10/24	
Toluene	ND	0.0250	1	07/10/24	07/10/24	
o-Xylene	ND	0.0250	1	07/10/24	07/10/24	
p,m-Xylene	ND	0.0500	1	07/10/24	07/10/24	
Total Xylenes	ND	0.0250	1	07/10/24	07/10/24	
Surrogate: Bromofluorobenzene		*107 %*	*70-130*	*07/10/24*	*07/10/24*	
Surrogate: 1,2-Dichloroethane-d4		*92.3 %*	*70-130*	*07/10/24*	*07/10/24*	
Surrogate: Toluene-d8		*103 %*	*70-130*	*07/10/24*	*07/10/24*	
Nonhalogenated Organics by EPA 8015D - GRO	mg/kg	mg/kg	Analyst: RKS			Batch: 2428054
Gasoline Range Organics (C6-C10)	ND	20.0	1	07/10/24	07/10/24	
Surrogate: Bromofluorobenzene		*107 %*	*70-130*	*07/10/24*	*07/10/24*	
Surrogate: 1,2-Dichloroethane-d4		*92.3 %*	*70-130*	*07/10/24*	*07/10/24*	
Surrogate: Toluene-d8		*103 %*	*70-130*	*07/10/24*	*07/10/24*	
Nonhalogenated Organics by EPA 8015D - DRO/ORO	mg/kg	mg/kg	Analyst: KM			Batch: 2428050
Diesel Range Organics (C10-C28)	ND	25.0	1	07/10/24	07/11/24	
Oil Range Organics (C28-C36)	ND	50.0	1	07/10/24	07/11/24	
Surrogate: n-Nonane		*119 %*	*50-200*	*07/10/24*	*07/11/24*	
Anions by EPA 300.0/9056A	mg/kg	mg/kg	Analyst: WF			Batch: 2428058
Chloride	ND	20.0	1	07/10/24	07/10/24	

Sample Data

Vertex Resource Services Inc.	Project Name:	Jackson Unit #003	
3101 Boyd Drive	Project Number:	24015-001	**Reported:**
Carlsbad NM, 88220	Project Manager:	Chance Dixon	7/11/2024 3:41:06PM

BH24-06 3'

E407053-07

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organic Compounds by EPA 8260B	mg/kg	mg/kg	Analyst: RKS			Batch: 2428054
Benzene	ND	0.0250	1	07/10/24	07/10/24	
Ethylbenzene	ND	0.0250	1	07/10/24	07/10/24	
Toluene	ND	0.0250	1	07/10/24	07/10/24	
o-Xylene	ND	0.0250	1	07/10/24	07/10/24	
p,m-Xylene	ND	0.0500	1	07/10/24	07/10/24	
Total Xylenes	ND	0.0250	1	07/10/24	07/10/24	
Surrogate: Bromofluorobenzene		*104 %*	*70-130*	*07/10/24*	*07/10/24*	
Surrogate: 1,2-Dichloroethane-d4		*90.8 %*	*70-130*	*07/10/24*	*07/10/24*	
Surrogate: Toluene-d8		*102 %*	*70-130*	*07/10/24*	*07/10/24*	
Nonhalogenated Organics by EPA 8015D - GRO	mg/kg	mg/kg	Analyst: RKS			Batch: 2428054
Gasoline Range Organics (C6-C10)	ND	20.0	1	07/10/24	07/10/24	
Surrogate: Bromofluorobenzene		*104 %*	*70-130*	*07/10/24*	*07/10/24*	
Surrogate: 1,2-Dichloroethane-d4		*90.8 %*	*70-130*	*07/10/24*	*07/10/24*	
Surrogate: Toluene-d8		*102 %*	*70-130*	*07/10/24*	*07/10/24*	
Nonhalogenated Organics by EPA 8015D - DRO/ORO	mg/kg	mg/kg	Analyst: KM			Batch: 2428050
Diesel Range Organics (C10-C28)	ND	25.0	1	07/10/24	07/11/24	
Oil Range Organics (C28-C36)	ND	50.0	1	07/10/24	07/11/24	
Surrogate: n-Nonane		*118 %*	*50-200*	*07/10/24*	*07/11/24*	
Anions by EPA 300.0/9056A	mg/kg	mg/kg	Analyst: WF			Batch: 2428058
Chloride	**44.4**	20.0	1	07/10/24	07/10/24	

Sample Data

Vertex Resource Services Inc.	Project Name:	Jackson Unit #003	
3101 Boyd Drive	Project Number:	24015-001	**Reported:**
Carlsbad NM, 88220	Project Manager:	Chance Dixon	7/11/2024 3:41:06PM

BH24-06 4'

E407053-08

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organic Compounds by EPA 8260B	mg/kg	mg/kg	Analyst: RKS			Batch: 2428054
Benzene	ND	0.0250	1	07/10/24	07/10/24	
Ethylbenzene	ND	0.0250	1	07/10/24	07/10/24	
Toluene	ND	0.0250	1	07/10/24	07/10/24	
o-Xylene	ND	0.0250	1	07/10/24	07/10/24	
p,m-Xylene	ND	0.0500	1	07/10/24	07/10/24	
Total Xylenes	ND	0.0250	1	07/10/24	07/10/24	
Surrogate: Bromofluorobenzene		*105 %*	*70-130*	*07/10/24*	*07/10/24*	
Surrogate: 1,2-Dichloroethane-d4		*92.2 %*	*70-130*	*07/10/24*	*07/10/24*	
Surrogate: Toluene-d8		*103 %*	*70-130*	*07/10/24*	*07/10/24*	
Nonhalogenated Organics by EPA 8015D - GRO	mg/kg	mg/kg	Analyst: RKS			Batch: 2428054
Gasoline Range Organics (C6-C10)	ND	20.0	1	07/10/24	07/10/24	
Surrogate: Bromofluorobenzene		*105 %*	*70-130*	*07/10/24*	*07/10/24*	
Surrogate: 1,2-Dichloroethane-d4		*92.2 %*	*70-130*	*07/10/24*	*07/10/24*	
Surrogate: Toluene-d8		*103 %*	*70-130*	*07/10/24*	*07/10/24*	
Nonhalogenated Organics by EPA 8015D - DRO/ORO	mg/kg	mg/kg	Analyst: KM			Batch: 2428050
Diesel Range Organics (C10-C28)	ND	25.0	1	07/10/24	07/11/24	
Oil Range Organics (C28-C36)	ND	50.0	1	07/10/24	07/11/24	
Surrogate: n-Nonane		*120 %*	*50-200*	*07/10/24*	*07/11/24*	
Anions by EPA 300.0/9056A	mg/kg	mg/kg	Analyst: WF			Batch: 2428058
Chloride	**49.4**	20.0	1	07/10/24	07/10/24	

Sample Data

Vertex Resource Services Inc.	Project Name:	Jackson Unit #003	
3101 Boyd Drive	Project Number:	24015-001	**Reported:**
Carlsbad NM, 88220	Project Manager:	Chance Dixon	7/11/2024 3:41:06PM

BH24-07 0'

E407053-09

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organic Compounds by EPA 8260B	mg/kg	mg/kg	Analyst: RKS			Batch: 2428054
Benzene	ND	0.0250	1	07/10/24	07/10/24	
Ethylbenzene	ND	0.0250	1	07/10/24	07/10/24	
Toluene	ND	0.0250	1	07/10/24	07/10/24	
o-Xylene	ND	0.0250	1	07/10/24	07/10/24	
p,m-Xylene	ND	0.0500	1	07/10/24	07/10/24	
Total Xylenes	ND	0.0250	1	07/10/24	07/10/24	
Surrogate: Bromofluorobenzene		*105 %*	*70-130*	*07/10/24*	*07/10/24*	
Surrogate: 1,2-Dichloroethane-d4		*92.6 %*	*70-130*	*07/10/24*	*07/10/24*	
Surrogate: Toluene-d8		*103 %*	*70-130*	*07/10/24*	*07/10/24*	
Nonhalogenated Organics by EPA 8015D - GRO	mg/kg	mg/kg	Analyst: RKS			Batch: 2428054
Gasoline Range Organics (C6-C10)	ND	20.0	1	07/10/24	07/10/24	
Surrogate: Bromofluorobenzene		*105 %*	*70-130*	*07/10/24*	*07/10/24*	
Surrogate: 1,2-Dichloroethane-d4		*92.6 %*	*70-130*	*07/10/24*	*07/10/24*	
Surrogate: Toluene-d8		*103 %*	*70-130*	*07/10/24*	*07/10/24*	
Nonhalogenated Organics by EPA 8015D - DRO/ORO	mg/kg	mg/kg	Analyst: KM			Batch: 2428050
Diesel Range Organics (C10-C28)	ND	25.0	1	07/10/24	07/11/24	
Oil Range Organics (C28-C36)	ND	50.0	1	07/10/24	07/11/24	
Surrogate: n-Nonane		*113 %*	*50-200*	*07/10/24*	*07/11/24*	
Anions by EPA 300.0/9056A	mg/kg	mg/kg	Analyst: WF			Batch: 2428058
Chloride	ND	20.0	1	07/10/24	07/11/24	

Sample Data

Vertex Resource Services Inc.	Project Name:	Jackson Unit #003	
3101 Boyd Drive	Project Number:	24015-001	**Reported:**
Carlsbad NM, 88220	Project Manager:	Chance Dixon	7/11/2024 3:41:06PM

BH24-07 1'

E407053-10

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organic Compounds by EPA 8260B	mg/kg	mg/kg	Analyst: RKS			Batch: 2428054
Benzene	ND	0.0250	1	07/10/24	07/10/24	
Ethylbenzene	ND	0.0250	1	07/10/24	07/10/24	
Toluene	ND	0.0250	1	07/10/24	07/10/24	
o-Xylene	ND	0.0250	1	07/10/24	07/10/24	
p,m-Xylene	ND	0.0500	1	07/10/24	07/10/24	
Total Xylenes	ND	0.0250	1	07/10/24	07/10/24	
Surrogate: Bromofluorobenzene		*104 %*	*70-130*	*07/10/24*	*07/10/24*	
Surrogate: 1,2-Dichloroethane-d4		*89.4 %*	*70-130*	*07/10/24*	*07/10/24*	
Surrogate: Toluene-d8		*103 %*	*70-130*	*07/10/24*	*07/10/24*	
Nonhalogenated Organics by EPA 8015D - GRO	mg/kg	mg/kg	Analyst: RKS			Batch: 2428054
Gasoline Range Organics (C6-C10)	ND	20.0	1	07/10/24	07/10/24	
Surrogate: Bromofluorobenzene		*104 %*	*70-130*	*07/10/24*	*07/10/24*	
Surrogate: 1,2-Dichloroethane-d4		*89.4 %*	*70-130*	*07/10/24*	*07/10/24*	
Surrogate: Toluene-d8		*103 %*	*70-130*	*07/10/24*	*07/10/24*	
Nonhalogenated Organics by EPA 8015D - DRO/ORO	mg/kg	mg/kg	Analyst: KM			Batch: 2428050
Diesel Range Organics (C10-C28)	ND	25.0	1	07/10/24	07/11/24	
Oil Range Organics (C28-C36)	ND	50.0	1	07/10/24	07/11/24	
Surrogate: n-Nonane		*113 %*	*50-200*	*07/10/24*	*07/11/24*	
Anions by EPA 300.0/9056A	mg/kg	mg/kg	Analyst: WF			Batch: 2428058
Chloride	ND	20.0	1	07/10/24	07/11/24	

Sample Data

Vertex Resource Services Inc.	Project Name:	Jackson Unit #003	
3101 Boyd Drive	Project Number:	24015-001	**Reported:**
Carlsbad NM, 88220	Project Manager:	Chance Dixon	7/11/2024 3:41:06PM

BH24-07 2'

E407053-11

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organic Compounds by EPA 8260B	mg/kg	mg/kg	Analyst: RKS			Batch: 2428054
Benzene	ND	0.0250	1	07/10/24	07/10/24	
Ethylbenzene	ND	0.0250	1	07/10/24	07/10/24	
Toluene	ND	0.0250	1	07/10/24	07/10/24	
o-Xylene	ND	0.0250	1	07/10/24	07/10/24	
p,m-Xylene	ND	0.0500	1	07/10/24	07/10/24	
Total Xylenes	ND	0.0250	1	07/10/24	07/10/24	
Surrogate: Bromofluorobenzene		*105 %*	*70-130*	*07/10/24*	*07/10/24*	
Surrogate: 1,2-Dichloroethane-d4		*89.3 %*	*70-130*	*07/10/24*	*07/10/24*	
Surrogate: Toluene-d8		*104 %*	*70-130*	*07/10/24*	*07/10/24*	
Nonhalogenated Organics by EPA 8015D - GRO	mg/kg	mg/kg	Analyst: RKS			Batch: 2428054
Gasoline Range Organics (C6-C10)	ND	20.0	1	07/10/24	07/10/24	
Surrogate: Bromofluorobenzene		*105 %*	*70-130*	*07/10/24*	*07/10/24*	
Surrogate: 1,2-Dichloroethane-d4		*89.3 %*	*70-130*	*07/10/24*	*07/10/24*	
Surrogate: Toluene-d8		*104 %*	*70-130*	*07/10/24*	*07/10/24*	
Nonhalogenated Organics by EPA 8015D - DRO/ORO	mg/kg	mg/kg	Analyst: KM			Batch: 2428050
Diesel Range Organics (C10-C28)	ND	25.0	1	07/10/24	07/11/24	
Oil Range Organics (C28-C36)	ND	50.0	1	07/10/24	07/11/24	
Surrogate: n-Nonane		*111 %*	*50-200*	*07/10/24*	*07/11/24*	
Anions by EPA 300.0/9056A	mg/kg	mg/kg	Analyst: WF			Batch: 2428058
Chloride	**23.0**	20.0	1	07/10/24	07/11/24	

Sample Data

Vertex Resource Services Inc.	Project Name:	Jackson Unit #003	
3101 Boyd Drive	Project Number:	24015-001	**Reported:**
Carlsbad NM, 88220	Project Manager:	Chance Dixon	7/11/2024 3:41:06PM

BH24-07 3'

E407053-12

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organic Compounds by EPA 8260B	mg/kg	mg/kg	Analyst: RKS			Batch: 2428054
Benzene	ND	0.0250	1	07/10/24	07/10/24	
Ethylbenzene	ND	0.0250	1	07/10/24	07/10/24	
Toluene	ND	0.0250	1	07/10/24	07/10/24	
o-Xylene	ND	0.0250	1	07/10/24	07/10/24	
p,m-Xylene	ND	0.0500	1	07/10/24	07/10/24	
Total Xylenes	ND	0.0250	1	07/10/24	07/10/24	
Surrogate: Bromofluorobenzene		*105 %*	*70-130*	*07/10/24*	*07/10/24*	
Surrogate: 1,2-Dichloroethane-d4		*91.0 %*	*70-130*	*07/10/24*	*07/10/24*	
Surrogate: Toluene-d8		*103 %*	*70-130*	*07/10/24*	*07/10/24*	
Nonhalogenated Organics by EPA 8015D - GRO	mg/kg	mg/kg	Analyst: RKS			Batch: 2428054
Gasoline Range Organics (C6-C10)	ND	20.0	1	07/10/24	07/10/24	
Surrogate: Bromofluorobenzene		*105 %*	*70-130*	*07/10/24*	*07/10/24*	
Surrogate: 1,2-Dichloroethane-d4		*91.0 %*	*70-130*	*07/10/24*	*07/10/24*	
Surrogate: Toluene-d8		*103 %*	*70-130*	*07/10/24*	*07/10/24*	
Nonhalogenated Organics by EPA 8015D - DRO/ORO	mg/kg	mg/kg	Analyst: KM			Batch: 2428050
Diesel Range Organics (C10-C28)	ND	25.0	1	07/10/24	07/11/24	
Oil Range Organics (C28-C36)	ND	50.0	1	07/10/24	07/11/24	
Surrogate: n-Nonane		*120 %*	*50-200*	*07/10/24*	*07/11/24*	
Anions by EPA 300.0/9056A	mg/kg	mg/kg	Analyst: WF			Batch: 2428058
Chloride	**25.2**	20.0	1	07/10/24	07/11/24	

Sample Data

Vertex Resource Services Inc.	Project Name:	Jackson Unit #003	
3101 Boyd Drive	Project Number:	24015-001	**Reported:**
Carlsbad NM, 88220	Project Manager:	Chance Dixon	7/11/2024 3:41:06PM

BH24-07 4'

E407053-13

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organic Compounds by EPA 8260B	mg/kg	mg/kg	Analyst: RKS			Batch: 2428054
Benzene	ND	0.0250	1	07/10/24	07/10/24	
Ethylbenzene	ND	0.0250	1	07/10/24	07/10/24	
Toluene	ND	0.0250	1	07/10/24	07/10/24	
o-Xylene	ND	0.0250	1	07/10/24	07/10/24	
p,m-Xylene	ND	0.0500	1	07/10/24	07/10/24	
Total Xylenes	ND	0.0250	1	07/10/24	07/10/24	
Surrogate: Bromofluorobenzene		*103 %*	*70-130*	*07/10/24*	*07/10/24*	
Surrogate: 1,2-Dichloroethane-d4		*90.9 %*	*70-130*	*07/10/24*	*07/10/24*	
Surrogate: Toluene-d8		*103 %*	*70-130*	*07/10/24*	*07/10/24*	
Nonhalogenated Organics by EPA 8015D - GRO	mg/kg	mg/kg	Analyst: RKS			Batch: 2428054
Gasoline Range Organics (C6-C10)	ND	20.0	1	07/10/24	07/10/24	
Surrogate: Bromofluorobenzene		*103 %*	*70-130*	*07/10/24*	*07/10/24*	
Surrogate: 1,2-Dichloroethane-d4		*90.9 %*	*70-130*	*07/10/24*	*07/10/24*	
Surrogate: Toluene-d8		*103 %*	*70-130*	*07/10/24*	*07/10/24*	
Nonhalogenated Organics by EPA 8015D - DRO/ORO	mg/kg	mg/kg	Analyst: KM			Batch: 2428050
Diesel Range Organics (C10-C28)	**412**	25.0	1	07/10/24	07/11/24	
Oil Range Organics (C28-C36)	**115**	50.0	1	07/10/24	07/11/24	
Surrogate: n-Nonane		*119 %*	*50-200*	*07/10/24*	*07/11/24*	
Anions by EPA 300.0/9056A	mg/kg	mg/kg	Analyst: WF			Batch: 2428058
Chloride	**20.2**	20.0	1	07/10/24	07/11/24	

Sample Data

Vertex Resource Services Inc.	Project Name:	Jackson Unit #003	
3101 Boyd Drive	Project Number:	24015-001	**Reported:**
Carlsbad NM, 88220	Project Manager:	Chance Dixon	7/11/2024 3:41:06PM

BH24-08 0'

E407053-14

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organic Compounds by EPA 8260B	mg/kg	mg/kg	Analyst: RKS			Batch: 2428054
Benzene	ND	0.0250	1	07/10/24	07/10/24	
Ethylbenzene	ND	0.0250	1	07/10/24	07/10/24	
Toluene	ND	0.0250	1	07/10/24	07/10/24	
o-Xylene	ND	0.0250	1	07/10/24	07/10/24	
p,m-Xylene	ND	0.0500	1	07/10/24	07/10/24	
Total Xylenes	ND	0.0250	1	07/10/24	07/10/24	
Surrogate: Bromofluorobenzene		*103 %*	*70-130*	*07/10/24*	*07/10/24*	
Surrogate: 1,2-Dichloroethane-d4		*88.7 %*	*70-130*	*07/10/24*	*07/10/24*	
Surrogate: Toluene-d8		*101 %*	*70-130*	*07/10/24*	*07/10/24*	
Nonhalogenated Organics by EPA 8015D - GRO	mg/kg	mg/kg	Analyst: RKS			Batch: 2428054
Gasoline Range Organics (C6-C10)	ND	20.0	1	07/10/24	07/10/24	
Surrogate: Bromofluorobenzene		*103 %*	*70-130*	*07/10/24*	*07/10/24*	
Surrogate: 1,2-Dichloroethane-d4		*88.7 %*	*70-130*	*07/10/24*	*07/10/24*	
Surrogate: Toluene-d8		*101 %*	*70-130*	*07/10/24*	*07/10/24*	
Nonhalogenated Organics by EPA 8015D - DRO/ORO	mg/kg	mg/kg	Analyst: KM			Batch: 2428050
Diesel Range Organics (C10-C28)	ND	25.0	1	07/10/24	07/11/24	
Oil Range Organics (C28-C36)	ND	50.0	1	07/10/24	07/11/24	
Surrogate: n-Nonane		*111 %*	*50-200*	*07/10/24*	*07/11/24*	
Anions by EPA 300.0/9056A	mg/kg	mg/kg	Analyst: WF			Batch: 2428058
Chloride	ND	20.0	1	07/10/24	07/11/24	

Sample Data

Vertex Resource Services Inc.	Project Name:	Jackson Unit #003	
3101 Boyd Drive	Project Number:	24015-001	**Reported:**
Carlsbad NM, 88220	Project Manager:	Chance Dixon	7/11/2024 3:41:06PM

BH24-08 1'

E407053-15

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organic Compounds by EPA 8260B	mg/kg	mg/kg	Analyst: RKS			Batch: 2428054
Benzene	ND	0.0250	1	07/10/24	07/10/24	
Ethylbenzene	ND	0.0250	1	07/10/24	07/10/24	
Toluene	ND	0.0250	1	07/10/24	07/10/24	
o-Xylene	ND	0.0250	1	07/10/24	07/10/24	
p,m-Xylene	ND	0.0500	1	07/10/24	07/10/24	
Total Xylenes	ND	0.0250	1	07/10/24	07/10/24	
Surrogate: Bromofluorobenzene		*104 %*	*70-130*	*07/10/24*	*07/10/24*	
Surrogate: 1,2-Dichloroethane-d4		*91.9 %*	*70-130*	*07/10/24*	*07/10/24*	
Surrogate: Toluene-d8		*104 %*	*70-130*	*07/10/24*	*07/10/24*	
Nonhalogenated Organics by EPA 8015D - GRO	mg/kg	mg/kg	Analyst: RKS			Batch: 2428054
Gasoline Range Organics (C6-C10)	ND	20.0	1	07/10/24	07/10/24	
Surrogate: Bromofluorobenzene		*104 %*	*70-130*	*07/10/24*	*07/10/24*	
Surrogate: 1,2-Dichloroethane-d4		*91.9 %*	*70-130*	*07/10/24*	*07/10/24*	
Surrogate: Toluene-d8		*104 %*	*70-130*	*07/10/24*	*07/10/24*	
Nonhalogenated Organics by EPA 8015D - DRO/ORO	mg/kg	mg/kg	Analyst: KM			Batch: 2428050
Diesel Range Organics (C10-C28)	ND	25.0	1	07/10/24	07/11/24	
Oil Range Organics (C28-C36)	ND	50.0	1	07/10/24	07/11/24	
Surrogate: n-Nonane		*115 %*	*50-200*	*07/10/24*	*07/11/24*	
Anions by EPA 300.0/9056A	mg/kg	mg/kg	Analyst: WF			Batch: 2428058
Chloride	ND	20.0	1	07/10/24	07/11/24	

Sample Data

Vertex Resource Services Inc.	Project Name:	Jackson Unit #003	
3101 Boyd Drive	Project Number:	24015-001	**Reported:**
Carlsbad NM, 88220	Project Manager:	Chance Dixon	7/11/2024 3:41:06PM

BH24-08 2'

E407053-16

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organic Compounds by EPA 8260B	mg/kg	mg/kg	Analyst: RKS			Batch: 2428054
Benzene	ND	0.0250	1	07/10/24	07/10/24	
Ethylbenzene	ND	0.0250	1	07/10/24	07/10/24	
Toluene	ND	0.0250	1	07/10/24	07/10/24	
o-Xylene	ND	0.0250	1	07/10/24	07/10/24	
p,m-Xylene	ND	0.0500	1	07/10/24	07/10/24	
Total Xylenes	ND	0.0250	1	07/10/24	07/10/24	
Surrogate: Bromofluorobenzene		*104 %*	*70-130*	*07/10/24*	*07/10/24*	
Surrogate: 1,2-Dichloroethane-d4		*90.6 %*	*70-130*	*07/10/24*	*07/10/24*	
Surrogate: Toluene-d8		*102 %*	*70-130*	*07/10/24*	*07/10/24*	
Nonhalogenated Organics by EPA 8015D - GRO	mg/kg	mg/kg	Analyst: RKS			Batch: 2428054
Gasoline Range Organics (C6-C10)	ND	20.0	1	07/10/24	07/10/24	
Surrogate: Bromofluorobenzene		*104 %*	*70-130*	*07/10/24*	*07/10/24*	
Surrogate: 1,2-Dichloroethane-d4		*90.6 %*	*70-130*	*07/10/24*	*07/10/24*	
Surrogate: Toluene-d8		*102 %*	*70-130*	*07/10/24*	*07/10/24*	
Nonhalogenated Organics by EPA 8015D - DRO/ORO	mg/kg	mg/kg	Analyst: KM			Batch: 2428050
Diesel Range Organics (C10-C28)	ND	25.0	1	07/10/24	07/11/24	
Oil Range Organics (C28-C36)	ND	50.0	1	07/10/24	07/11/24	
Surrogate: n-Nonane		*115 %*	*50-200*	*07/10/24*	*07/11/24*	
Anions by EPA 300.0/9056A	mg/kg	mg/kg	Analyst: WF			Batch: 2428058
Chloride	**83.7**	20.0	1	07/10/24	07/11/24	

Sample Data

Vertex Resource Services Inc.	Project Name:	Jackson Unit #003	
3101 Boyd Drive	Project Number:	24015-001	**Reported:**
Carlsbad NM, 88220	Project Manager:	Chance Dixon	7/11/2024 3:41:06PM

BH24-08 3'

E407053-17

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organic Compounds by EPA 8260B	mg/kg	mg/kg	Analyst: RKS			Batch: 2428054
Benzene	ND	0.0250	1	07/10/24	07/10/24	
Ethylbenzene	ND	0.0250	1	07/10/24	07/10/24	
Toluene	ND	0.0250	1	07/10/24	07/10/24	
o-Xylene	ND	0.0250	1	07/10/24	07/10/24	
p,m-Xylene	ND	0.0500	1	07/10/24	07/10/24	
Total Xylenes	ND	0.0250	1	07/10/24	07/10/24	
Surrogate: Bromofluorobenzene		*105 %*	*70-130*	*07/10/24*	*07/10/24*	
Surrogate: 1,2-Dichloroethane-d4		*94.2 %*	*70-130*	*07/10/24*	*07/10/24*	
Surrogate: Toluene-d8		*104 %*	*70-130*	*07/10/24*	*07/10/24*	
Nonhalogenated Organics by EPA 8015D - GRO	mg/kg	mg/kg	Analyst: RKS			Batch: 2428054
Gasoline Range Organics (C6-C10)	ND	20.0	1	07/10/24	07/10/24	
Surrogate: Bromofluorobenzene		*105 %*	*70-130*	*07/10/24*	*07/10/24*	
Surrogate: 1,2-Dichloroethane-d4		*94.2 %*	*70-130*	*07/10/24*	*07/10/24*	
Surrogate: Toluene-d8		*104 %*	*70-130*	*07/10/24*	*07/10/24*	
Nonhalogenated Organics by EPA 8015D - DRO/ORO	mg/kg	mg/kg	Analyst: KM			Batch: 2428050
Diesel Range Organics (C10-C28)	ND	25.0	1	07/10/24	07/11/24	
Oil Range Organics (C28-C36)	ND	50.0	1	07/10/24	07/11/24	
Surrogate: n-Nonane		*101 %*	*50-200*	*07/10/24*	*07/11/24*	
Anions by EPA 300.0/9056A	mg/kg	mg/kg	Analyst: WF			Batch: 2428058
Chloride	**142**	20.0	1	07/10/24	07/11/24	

Sample Data

Vertex Resource Services Inc.	Project Name:	Jackson Unit #003	
3101 Boyd Drive	Project Number:	24015-001	**Reported:**
Carlsbad NM, 88220	Project Manager:	Chance Dixon	7/11/2024 3:41:06PM

BH24-08 4'

E407053-18

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organic Compounds by EPA 8260B	mg/kg	mg/kg	Analyst: RKS			Batch: 2428054
Benzene	ND	0.0250	1	07/10/24	07/10/24	
Ethylbenzene	ND	0.0250	1	07/10/24	07/10/24	
Toluene	ND	0.0250	1	07/10/24	07/10/24	
o-Xylene	ND	0.0250	1	07/10/24	07/10/24	
p,m-Xylene	ND	0.0500	1	07/10/24	07/10/24	
Total Xylenes	ND	0.0250	1	07/10/24	07/10/24	
Surrogate: Bromofluorobenzene		*104 %*	*70-130*	*07/10/24*	*07/10/24*	
Surrogate: 1,2-Dichloroethane-d4		*89.6 %*	*70-130*	*07/10/24*	*07/10/24*	
Surrogate: Toluene-d8		*102 %*	*70-130*	*07/10/24*	*07/10/24*	
Nonhalogenated Organics by EPA 8015D - GRO	mg/kg	mg/kg	Analyst: RKS			Batch: 2428054
Gasoline Range Organics (C6-C10)	ND	20.0	1	07/10/24	07/10/24	
Surrogate: Bromofluorobenzene		*104 %*	*70-130*	*07/10/24*	*07/10/24*	
Surrogate: 1,2-Dichloroethane-d4		*89.6 %*	*70-130*	*07/10/24*	*07/10/24*	
Surrogate: Toluene-d8		*102 %*	*70-130*	*07/10/24*	*07/10/24*	
Nonhalogenated Organics by EPA 8015D - DRO/ORO	mg/kg	mg/kg	Analyst: KM			Batch: 2428050
Diesel Range Organics (C10-C28)	ND	25.0	1	07/10/24	07/11/24	
Oil Range Organics (C28-C36)	ND	50.0	1	07/10/24	07/11/24	
Surrogate: n-Nonane		*108 %*	*50-200*	*07/10/24*	*07/11/24*	
Anions by EPA 300.0/9056A	mg/kg	mg/kg	Analyst: WF			Batch: 2428058
Chloride	**91.4**	20.0	1	07/10/24	07/11/24	

Sample Data

Vertex Resource Services Inc.	Project Name:	Jackson Unit #003	
3101 Boyd Drive	Project Number:	24015-001	**Reported:**
Carlsbad NM, 88220	Project Manager:	Chance Dixon	7/11/2024 3:41:06PM

BH24-02 5'

E407053-19

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organic Compounds by EPA 8260B	mg/kg	mg/kg	Analyst: RKS			Batch: 2428054
Benzene	ND	0.0250	1	07/10/24	07/10/24	
Ethylbenzene	ND	0.0250	1	07/10/24	07/10/24	
Toluene	ND	0.0250	1	07/10/24	07/10/24	
o-Xylene	ND	0.0250	1	07/10/24	07/10/24	
p,m-Xylene	ND	0.0500	1	07/10/24	07/10/24	
Total Xylenes	ND	0.0250	1	07/10/24	07/10/24	
Surrogate: Bromofluorobenzene		*107 %*	*70-130*	*07/10/24*	*07/10/24*	
Surrogate: 1,2-Dichloroethane-d4		*93.0 %*	*70-130*	*07/10/24*	*07/10/24*	
Surrogate: Toluene-d8		*103 %*	*70-130*	*07/10/24*	*07/10/24*	
Nonhalogenated Organics by EPA 8015D - GRO	mg/kg	mg/kg	Analyst: RKS			Batch: 2428054
Gasoline Range Organics (C6-C10)	ND	20.0	1	07/10/24	07/10/24	
Surrogate: Bromofluorobenzene		*107 %*	*70-130*	*07/10/24*	*07/10/24*	
Surrogate: 1,2-Dichloroethane-d4		*93.0 %*	*70-130*	*07/10/24*	*07/10/24*	
Surrogate: Toluene-d8		*103 %*	*70-130*	*07/10/24*	*07/10/24*	
Nonhalogenated Organics by EPA 8015D - DRO/ORO	mg/kg	mg/kg	Analyst: KM			Batch: 2428050
Diesel Range Organics (C10-C28)	**412**	25.0	1	07/10/24	07/11/24	
Oil Range Organics (C28-C36)	**84.6**	50.0	1	07/10/24	07/11/24	
Surrogate: n-Nonane		*111 %*	*50-200*	*07/10/24*	*07/11/24*	
Anions by EPA 300.0/9056A	mg/kg	mg/kg	Analyst: WF			Batch: 2428058
Chloride	ND	20.0	1	07/10/24	07/11/24	

Sample Data

Vertex Resource Services Inc.	Project Name:	Jackson Unit #003	
3101 Boyd Drive	Project Number:	24015-001	**Reported:**
Carlsbad NM, 88220	Project Manager:	Chance Dixon	7/11/2024 3:41:06PM

BH24-02 6'

E407053-20

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organic Compounds by EPA 8260B	mg/kg	mg/kg	Analyst: RKS			Batch: 2428054
Benzene	ND	0.0250	1	07/10/24	07/10/24	
Ethylbenzene	ND	0.0250	1	07/10/24	07/10/24	
Toluene	ND	0.0250	1	07/10/24	07/10/24	
o-Xylene	ND	0.0250	1	07/10/24	07/10/24	
p,m-Xylene	ND	0.0500	1	07/10/24	07/10/24	
Total Xylenes	ND	0.0250	1	07/10/24	07/10/24	
Surrogate: Bromofluorobenzene		*105 %*	*70-130*	*07/10/24*	*07/10/24*	
Surrogate: 1,2-Dichloroethane-d4		*89.1 %*	*70-130*	*07/10/24*	*07/10/24*	
Surrogate: Toluene-d8		*103 %*	*70-130*	*07/10/24*	*07/10/24*	
Nonhalogenated Organics by EPA 8015D - GRO	mg/kg	mg/kg	Analyst: RKS			Batch: 2428054
Gasoline Range Organics (C6-C10)	ND	20.0	1	07/10/24	07/10/24	
Surrogate: Bromofluorobenzene		*105 %*	*70-130*	*07/10/24*	*07/10/24*	
Surrogate: 1,2-Dichloroethane-d4		*89.1 %*	*70-130*	*07/10/24*	*07/10/24*	
Surrogate: Toluene-d8		*103 %*	*70-130*	*07/10/24*	*07/10/24*	
Nonhalogenated Organics by EPA 8015D - DRO/ORO	mg/kg	mg/kg	Analyst: KM			Batch: 2428050
Diesel Range Organics (C10-C28)	**237**	25.0	1	07/10/24	07/11/24	
Oil Range Organics (C28-C36)	**67.7**	50.0	1	07/10/24	07/11/24	
Surrogate: n-Nonane		*110 %*	*50-200*	*07/10/24*	*07/11/24*	
Anions by EPA 300.0/9056A	mg/kg	mg/kg	Analyst: WF			Batch: 2428058
Chloride	ND	20.0	1	07/10/24	07/11/24	

Sample Data

Vertex Resource Services Inc.	Project Name:	Jackson Unit #003	
3101 Boyd Drive	Project Number:	24015-001	**Reported:**
Carlsbad NM, 88220	Project Manager:	Chance Dixon	7/11/2024 3:41:06PM

BH24-05 5'

E407053-21

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organic Compounds by EPA 8260B	mg/kg	mg/kg	Analyst: RKS			Batch: 2428055
Benzene	ND	0.0250	1	07/10/24	07/10/24	
Ethylbenzene	ND	0.0250	1	07/10/24	07/10/24	
Toluene	ND	0.0250	1	07/10/24	07/10/24	
o-Xylene	ND	0.0250	1	07/10/24	07/10/24	
p,m-Xylene	ND	0.0500	1	07/10/24	07/10/24	
Total Xylenes	ND	0.0250	1	07/10/24	07/10/24	
Surrogate: Bromofluorobenzene		*106 %*	*70-130*	*07/10/24*	*07/10/24*	
Surrogate: 1,2-Dichloroethane-d4		*89.5 %*	*70-130*	*07/10/24*	*07/10/24*	
Surrogate: Toluene-d8		*102 %*	*70-130*	*07/10/24*	*07/10/24*	
Nonhalogenated Organics by EPA 8015D - GRO	mg/kg	mg/kg	Analyst: RKS			Batch: 2428055
Gasoline Range Organics (C6-C10)	ND	20.0	1	07/10/24	07/10/24	
Surrogate: Bromofluorobenzene		*106 %*	*70-130*	*07/10/24*	*07/10/24*	
Surrogate: 1,2-Dichloroethane-d4		*89.5 %*	*70-130*	*07/10/24*	*07/10/24*	
Surrogate: Toluene-d8		*102 %*	*70-130*	*07/10/24*	*07/10/24*	
Nonhalogenated Organics by EPA 8015D - DRO/ORO	mg/kg	mg/kg	Analyst: KM			Batch: 2428051
Diesel Range Organics (C10-C28)	**334**	25.0	1	07/10/24	07/10/24	
Oil Range Organics (C28-C36)	**88.4**	50.0	1	07/10/24	07/10/24	
Surrogate: n-Nonane		*99.4 %*	*50-200*	*07/10/24*	*07/10/24*	
Anions by EPA 300.0/9056A	mg/kg	mg/kg	Analyst: DT			Batch: 2428052
Chloride	**21.6**	20.0	1	07/10/24	07/10/24	

QC Summary Data

Vertex Resource Services Inc.	Project Name:	Jackson Unit #003	**Reported:**
3101 Boyd Drive	Project Number:	24015-001	
Carlsbad NM, 88220	Project Manager:	Chance Dixon	7/11/2024 3:41:06PM

Volatile Organic Compounds by EPA 8260B

Analyst: RKS

Analyte	Result	Reporting Limit	Spike Level	Source Result	Rec	Rec Limits	RPD	RPD Limit	Notes
	mg/kg	mg/kg	mg/kg	mg/kg	%	%	%	%	
Blank (2428054-BLK1)									Prepared: 07/10/24 Analyzed: 07/10/24
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: Bromofluorobenzene	*0.540*		*0.500*		*108*	*70-130*			
Surrogate: 1,2-Dichloroethane-d4	*0.446*		*0.500*		*89.2*	*70-130*			
Surrogate: Toluene-d8	*0.510*		*0.500*		*102*	*70-130*			
LCS (2428054-BS1)									Prepared: 07/10/24 Analyzed: 07/10/24
Benzene	2.30	0.0250	2.50		92.2	70-130			
Ethylbenzene	2.49	0.0250	2.50		99.4	70-130			
Toluene	2.48	0.0250	2.50		99.3	70-130			
o-Xylene	2.60	0.0250	2.50		104	70-130			
p,m-Xylene	5.19	0.0500	5.00		104	70-130			
Total Xylenes	7.79	0.0250	7.50		104	70-130			
Surrogate: Bromofluorobenzene	*0.537*		*0.500*		*107*	*70-130*			
Surrogate: 1,2-Dichloroethane-d4	*0.458*		*0.500*		*91.5*	*70-130*			
Surrogate: Toluene-d8	*0.516*		*0.500*		*103*	*70-130*			
Matrix Spike (2428054-MS1)				**Source: E407053-10**					Prepared: 07/10/24 Analyzed: 07/10/24
Benzene	2.34	0.0250	2.50	ND	93.5	48-131			
Ethylbenzene	2.50	0.0250	2.50	ND	100	45-135			
Toluene	2.48	0.0250	2.50	ND	99.1	48-130			
o-Xylene	2.63	0.0250	2.50	ND	105	43-135			
p,m-Xylene	5.23	0.0500	5.00	ND	105	43-135			
Total Xylenes	7.85	0.0250	7.50	ND	105	43-135			
Surrogate: Bromofluorobenzene	*0.538*		*0.500*		*108*	*70-130*			
Surrogate: 1,2-Dichloroethane-d4	*0.467*		*0.500*		*93.3*	*70-130*			
Surrogate: Toluene-d8	*0.516*		*0.500*		*103*	*70-130*			
Matrix Spike Dup (2428054-MSD1)				**Source: E407053-10**					Prepared: 07/10/24 Analyzed: 07/10/24
Benzene	2.38	0.0250	2.50	ND	95.2	48-131	1.80	23	
Ethylbenzene	2.54	0.0250	2.50	ND	102	45-135	1.71	27	
Toluene	2.52	0.0250	2.50	ND	101	48-130	1.82	24	
o-Xylene	2.64	0.0250	2.50	ND	106	43-135	0.608	27	
p,m-Xylene	5.26	0.0500	5.00	ND	105	43-135	0.563	27	
Total Xylenes	7.90	0.0250	7.50	ND	105	43-135	0.578	27	
Surrogate: Bromofluorobenzene	*0.532*		*0.500*		*106*	*70-130*			
Surrogate: 1,2-Dichloroethane-d4	*0.461*		*0.500*		*92.2*	*70-130*			
Surrogate: Toluene-d8	*0.522*		*0.500*		*104*	*70-130*			

QC Summary Data

Vertex Resource Services Inc.	Project Name:	Jackson Unit #003	**Reported:**
3101 Boyd Drive	Project Number:	24015-001	
Carlsbad NM, 88220	Project Manager:	Chance Dixon	7/11/2024 3:41:06PM

Volatile Organic Compounds by EPA 8260B

Analyst: RKS

Analyte	Result	Reporting Limit	Spike Level	Source Result	Rec	Rec Limits	RPD	RPD Limit	Notes
	mg/kg	mg/kg	mg/kg	mg/kg	%	%	%	%	
Blank (2428055-BLK1)									Prepared: 07/10/24 Analyzed: 07/11/24
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	*0.529*		*0.500*		*106*	*70-130*			
Surrogate: 1,2-Dichloroethane-d4	*0.457*		*0.500*		*91.3*	*70-130*			
Surrogate: Toluene-d8	*0.512*		*0.500*		*102*	*70-130*			
LCS (2428055-BS1)									Prepared: 07/10/24 Analyzed: 07/11/24
Benzene	2.25	0.0250	2.50		89.8	70-130			
Ethylbenzene	2.42	0.0250	2.50		96.9	70-130			
Toluene	2.39	0.0250	2.50		95.4	70-130			
o-Xylene	2.53	0.0250	2.50		101	70-130			
p,m-Xylene	5.06	0.0500	5.00		101	70-130			
Total Xylenes	7.58	0.0250	7.50		101	70-130			
Surrogate: Bromofluorobenzene	*0.533*		*0.500*		*107*	*70-130*			
Surrogate: 1,2-Dichloroethane-d4	*0.478*		*0.500*		*95.5*	*70-130*			
Surrogate: Toluene-d8	*0.513*		*0.500*		*103*	*70-130*			
Matrix Spike (2428055-MS1)				**Source: E407057-03**					Prepared: 07/10/24 Analyzed: 07/11/24
Benzene	2.26	0.0250	2.50	ND	90.3	48-131			
Ethylbenzene	2.46	0.0250	2.50	ND	98.6	45-135			
Toluene	2.42	0.0250	2.50	ND	96.7	48-130			
o-Xylene	2.56	0.0250	2.50	ND	102	43-135			
p,m-Xylene	5.11	0.0500	5.00	ND	102	43-135			
Total Xylenes	7.67	0.0250	7.50	ND	102	43-135			
Surrogate: Bromofluorobenzene	*0.544*		*0.500*		*109*	*70-130*			
Surrogate: 1,2-Dichloroethane-d4	*0.472*		*0.500*		*94.4*	*70-130*			
Surrogate: Toluene-d8	*0.518*		*0.500*		*104*	*70-130*			
Matrix Spike Dup (2428055-MSD1)				**Source: E407057-03**					Prepared: 07/10/24 Analyzed: 07/11/24
Benzene	2.19	0.0250	2.50	ND	87.5	48-131	3.08	23	
Ethylbenzene	2.42	0.0250	2.50	ND	97.0	45-135	1.64	27	
Toluene	2.37	0.0250	2.50	ND	94.8	48-130	1.96	24	
o-Xylene	2.54	0.0250	2.50	ND	101	43-135	0.864	27	
p,m-Xylene	5.06	0.0500	5.00	ND	101	43-135	0.904	27	
Total Xylenes	7.60	0.0250	7.50	ND	101	43-135	0.891	27	
Surrogate: Bromofluorobenzene	*0.542*		*0.500*		*108*	*70-130*			
Surrogate: 1,2-Dichloroethane-d4	*0.464*		*0.500*		*92.8*	*70-130*			
Surrogate: Toluene-d8	*0.513*		*0.500*		*103*	*70-130*			

QC Summary Data

Vertex Resource Services Inc.	Project Name:	Jackson Unit #003	**Reported:**
3101 Boyd Drive	Project Number:	24015-001	
Carlsbad NM, 88220	Project Manager:	Chance Dixon	7/11/2024 3:41:06PM

Nonhalogenated Organics by EPA 8015D - GRO

Analyst: RKS

Analyte	Result	Reporting Limit	Spike Level	Source Result	Rec	Rec Limits	RPD	RPD Limit	Notes
	mg/kg	mg/kg	mg/kg	mg/kg	%	%	%	%	
Blank (2428054-BLK1)									Prepared: 07/10/24 Analyzed: 07/10/24
Gasoline Range Organics (C6-C10)	ND	20.0							
Surrogate: Bromofluorobenzene	*0.540*		*0.500*		*108*	*70-130*			
Surrogate: 1,2-Dichloroethane-d4	*0.446*		*0.500*		*89.2*	*70-130*			
Surrogate: Toluene-d8	*0.510*		*0.500*		*102*	*70-130*			
LCS (2428054-BS2)									Prepared: 07/10/24 Analyzed: 07/10/24
Gasoline Range Organics (C6-C10)	57.4	20.0	50.0		115	70-130			
Surrogate: Bromofluorobenzene	*0.540*		*0.500*		*108*	*70-130*			
Surrogate: 1,2-Dichloroethane-d4	*0.458*		*0.500*		*91.6*	*70-130*			
Surrogate: Toluene-d8	*0.516*		*0.500*		*103*	*70-130*			
Matrix Spike (2428054-MS2)				**Source: E407053-10**					Prepared: 07/10/24 Analyzed: 07/10/24
Gasoline Range Organics (C6-C10)	56.4	20.0	50.0	ND	113	70-130			
Surrogate: Bromofluorobenzene	*0.535*		*0.500*		*107*	*70-130*			
Surrogate: 1,2-Dichloroethane-d4	*0.468*		*0.500*		*93.6*	*70-130*			
Surrogate: Toluene-d8	*0.522*		*0.500*		*104*	*70-130*			
Matrix Spike Dup (2428054-MSD2)				**Source: E407053-10**					Prepared: 07/10/24 Analyzed: 07/10/24
Gasoline Range Organics (C6-C10)	57.6	20.0	50.0	ND	115	70-130	2.08	20	
Surrogate: Bromofluorobenzene	*0.538*		*0.500*		*108*	*70-130*			
Surrogate: 1,2-Dichloroethane-d4	*0.461*		*0.500*		*92.2*	*70-130*			
Surrogate: Toluene-d8	*0.520*		*0.500*		*104*	*70-130*			

QC Summary Data

Vertex Resource Services Inc.	Project Name:	Jackson Unit #003	**Reported:**
3101 Boyd Drive	Project Number:	24015-001	
Carlsbad NM, 88220	Project Manager:	Chance Dixon	7/11/2024 3:41:06PM

Nonhalogenated Organics by EPA 8015D - GRO

Analyst: RKS

Analyte	Result	Reporting Limit	Spike Level	Source Result	Rec	Rec Limits	RPD	RPD Limit	Notes
	mg/kg	mg/kg	mg/kg	mg/kg	%	%	%	%	
Blank (2428055-BLK1)									Prepared: 07/10/24 Analyzed: 07/11/24
Gasoline Range Organics (C6-C10)	ND	20.0							
Surrogate: Bromofluorobenzene	*0.529*		*0.500*		*106*	*70-130*			
Surrogate: 1,2-Dichloroethane-d4	*0.457*		*0.500*		*91.3*	*70-130*			
Surrogate: Toluene-d8	*0.512*		*0.500*		*102*	*70-130*			
LCS (2428055-BS2)									Prepared: 07/10/24 Analyzed: 07/11/24
Gasoline Range Organics (C6-C10)	57.2	20.0	50.0		114	70-130			
Surrogate: Bromofluorobenzene	*0.549*		*0.500*		*110*	*70-130*			
Surrogate: 1,2-Dichloroethane-d4	*0.455*		*0.500*		*91.0*	*70-130*			
Surrogate: Toluene-d8	*0.516*		*0.500*		*103*	*70-130*			
Matrix Spike (2428055-MS2)				**Source: E407057-03**					Prepared: 07/10/24 Analyzed: 07/11/24
Gasoline Range Organics (C6-C10)	55.5	20.0	50.0	ND	111	70-130			
Surrogate: Bromofluorobenzene	*0.537*		*0.500*		*107*	*70-130*			
Surrogate: 1,2-Dichloroethane-d4	*0.445*		*0.500*		*88.9*	*70-130*			
Surrogate: Toluene-d8	*0.522*		*0.500*		*104*	*70-130*			
Matrix Spike Dup (2428055-MSD2)				**Source: E407057-03**					Prepared: 07/10/24 Analyzed: 07/11/24
Gasoline Range Organics (C6-C10)	56.9	20.0	50.0	ND	114	70-130	2.39	20	
Surrogate: Bromofluorobenzene	*0.561*		*0.500*		*112*	*70-130*			
Surrogate: 1,2-Dichloroethane-d4	*0.465*		*0.500*		*93.0*	*70-130*			
Surrogate: Toluene-d8	*0.519*		*0.500*		*104*	*70-130*			

QC Summary Data

Vertex Resource Services Inc.	Project Name:	Jackson Unit #003	**Reported:**
3101 Boyd Drive	Project Number:	24015-001	
Carlsbad NM, 88220	Project Manager:	Chance Dixon	7/11/2024 3:41:06PM

Nonhalogenated Organics by EPA 8015D - DRO/ORO

Analyst: KM

Analyte	Result	Reporting Limit	Spike Level	Source Result	Rec	Rec Limits	RPD	RPD Limit	Notes
	mg/kg	mg/kg	mg/kg	mg/kg	%	%	%	%	
Blank (2428050-BLK1)									Prepared: 07/10/24 Analyzed: 07/10/24
Diesel Range Organics (C10-C28)	ND	25.0							
Oil Range Organics (C28-C36)	ND	50.0							
Surrogate: n-Nonane	*59.7*		*50.0*		*119*	*50-200*			
LCS (2428050-BS1)									Prepared: 07/10/24 Analyzed: 07/10/24
Diesel Range Organics (C10-C28)	318	25.0	250		127	38-132			
Surrogate: n-Nonane	*60.3*		*50.0*		*121*	*50-200*			
Matrix Spike (2428050-MS1)				**Source: E407053-08**					Prepared: 07/10/24 Analyzed: 07/11/24
Diesel Range Organics (C10-C28)	329	25.0	250	ND	131	38-132			
Surrogate: n-Nonane	*61.8*		*50.0*		*124*	*50-200*			
Matrix Spike Dup (2428050-MSD1)				**Source: E407053-08**					Prepared: 07/10/24 Analyzed: 07/11/24
Diesel Range Organics (C10-C28)	328	25.0	250	ND	131	38-132	0.155	20	
Surrogate: n-Nonane	*59.5*		*50.0*		*119*	*50-200*			

QC Summary Data

Vertex Resource Services Inc.	Project Name:	Jackson Unit #003	**Reported:**
3101 Boyd Drive	Project Number:	24015-001	
Carlsbad NM, 88220	Project Manager:	Chance Dixon	7/11/2024 3:41:06PM

Nonhalogenated Organics by EPA 8015D - DRO/ORO

Analyst: KM

Analyte	Result	Reporting Limit	Spike Level	Source Result	Rec	Rec Limits	RPD	RPD Limit	Notes
	mg/kg	mg/kg	mg/kg	mg/kg	%	%	%	%	
Blank (2428051-BLK1)									Prepared: 07/10/24 Analyzed: 07/10/24
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 (2428051-BS1)									Prepared: 07/10/24 Analyzed: 07/10/24
Diesel Range Organics (C10-C28)	273	25.0	250		109	38-132			
Surrogate: n-Nonane	*58.2*		*50.0*		*116*	*50-200*			
Matrix Spike (2428051-MS1)				**Source: E407054-04**					Prepared: 07/10/24 Analyzed: 07/10/24
Diesel Range Organics (C10-C28)	274	25.0	250	ND	110	38-132			
Surrogate: n-Nonane	*53.1*		*50.0*		*106*	*50-200*			
Matrix Spike Dup (2428051-MSD1)				**Source: E407054-04**					Prepared: 07/10/24 Analyzed: 07/10/24
Diesel Range Organics (C10-C28)	278	25.0	250	ND	111	38-132	1.34	20	
Surrogate: n-Nonane	*54.1*		*50.0*		*108*	*50-200*			

QC Summary Data

Vertex Resource Services Inc.	Project Name:	Jackson Unit #003	**Reported:**
3101 Boyd Drive	Project Number:	24015-001	
Carlsbad NM, 88220	Project Manager:	Chance Dixon	7/11/2024 3:41:06PM

Anions by EPA 300.0/9056A

Analyst: DT

Analyte	Result	Reporting Limit	Spike Level	Source Result	Rec	Rec Limits	RPD	RPD Limit	Notes
	mg/kg	mg/kg	mg/kg	mg/kg	%	%	%	%	
Blank (2428052-BLK1)									Prepared: 07/10/24 Analyzed: 07/10/24
Chloride	ND	20.0							
LCS (2428052-BS1)									Prepared: 07/10/24 Analyzed: 07/10/24
Chloride	250	20.0	250		100	90-110			
Matrix Spike (2428052-MS1)				**Source: E407049-01**					Prepared: 07/10/24 Analyzed: 07/10/24
Chloride	281	200	250	ND	112	80-120			
Matrix Spike Dup (2428052-MSD1)				**Source: E407049-01**					Prepared: 07/10/24 Analyzed: 07/10/24
Chloride	275	200	250	ND	110	80-120	2.01	20	

QC Summary Data

Vertex Resource Services Inc.	Project Name:	Jackson Unit #003	**Reported:**
3101 Boyd Drive	Project Number:	24015-001	
Carlsbad NM, 88220	Project Manager:	Chance Dixon	7/11/2024 3:41:06PM

Anions by EPA 300.0/9056A

Analyst: WF

Analyte	Result	Reporting Limit	Spike Level	Source Result	Rec	Rec Limits	RPD	RPD Limit	Notes
	mg/kg	mg/kg	mg/kg	mg/kg	%	%	%	%	
Blank (2428058-BLK1)									Prepared: 07/10/24 Analyzed: 07/10/24
Chloride	ND	20.0							
LCS (2428058-BS1)									Prepared: 07/10/24 Analyzed: 07/10/24
Chloride	252	20.0	250		101	90-110			
Matrix Spike (2428058-MS1)				**Source: E407053-03**					Prepared: 07/10/24 Analyzed: 07/10/24
Chloride	264	20.0	250	ND	106	80-120			
Matrix Spike Dup (2428058-MSD1)				**Source: E407053-03**					Prepared: 07/10/24 Analyzed: 07/10/24
Chloride	263	20.0	250	ND	105	80-120	0.603	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:	Jackson Unit #003	
3101 Boyd Drive	Project Number:	24015-001	**Reported:**
Carlsbad NM, 88220	Project Manager:	Chance Dixon	07/11/24 15:41

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.

Released to Imaging: 9/3/2024 11:39:55 AM
Received by OCD: 9/3/2024 11:00:09 AM

Client Information	Invoice Information	Lab Use Only		TAT				State				
Client: **Vertex (bill direct to Tap Rock)**	Company: **Tap Rock (Bill Ramsay)**	Lab WO#	Job Number	1D	2D	3D	Std	NM	CO	UT	TX	
Project Name: **Jackson Unit #003**	Address:	E407053	24015-0001		X							
Project Manager: **Chance Dixon**	City, State, Zip:											
Project Number: **24E-03316**	Phone:											
City, State, Zip:	Email:											
Phone:	Miscellaneous: **Direct bill to Tap Rock ATTN: Bill Ramsay.**											
Email: cdixon@vertexresource.com												

Sample Information

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			
15:45	07.04.2024	Soil	1	BH24-05 2'		1	X	X	X		X						
15:50	07.04.2024	Soil	1	BH24-05 3'		2	X	X	X		X						
15:55	07.04.2024	Soil	1	BH24-05 4'		3	X	X	X		X						
16:00	07.04.2024	Soil	1	BH24-06 0'		4	X	X	X		X						
16:00	07.04.2024	Soil	1	BH24-06 1'		5	X	X	X		X						
16:05	07.04.2024	Soil	1	BH24-06 2'		6	X	X	X		X						
16:10	07.04.2024	Soil	1	BH24-06 3'		7	X	X	X		X						
16:15	07.04.2024	Soil	1	BH24-06 4'		8	X	X	X		X						
8:00	07.05.2024	Soil	1	BH24-07 0'		9	X	X	X		X						
8:05	07.05.2024	Soil	1	BH24-07 1'		10	X	X	X		X						

Analysis and Method

EPA Program

SDWA	CWA	RCRA

Compliance Y or N

PWSID #

Remarks

Additional Instructions: Direct bill to Tap Rock ATTN: Bill Ramsay. Please email final report to cdixon@vertexresource.com, permain@vertexresource.com

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: **L. Pullman**

Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time
L. Pullman	7-9-2024	07:00	Michelle Gonzales	7.9.24	0700
Michelle Gonzales	7.9.24	1725	A.M.	7.9.24	1725
A.M.	7.9.24	2345	St	7-10-24	0830
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 6 °C 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

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

Page 89 of 214

Released to Imaging: 9/3/2024 11:39:55 AM
Received by OCD: 9/3/2024 11:00:09 AM

Client Information	Invoice Information	Lab Use Only		TAT				State					
Client: **Vertex (bill direct to Tap Rock)**	Company: **Tap Rock (Bill Ramsay)**	Lab WO#	Job Number	1D	2D	3D	Std	NM	CO	UT	TX		
Project Name: **Jackson Unit #003**	Address:	E407083	24015-0001		X								
Project Manager: **Chance Dixon**	City, State, Zip:												
Project Number: **24E-03316**	Phone:												
City, State, Zip:	Email:												
Phone:	Miscellaneous: **Direct bill to Tap Rock ATTN: Bill Ramsay.**												
Email: cdixon@vertexresource.com													

Sample Information

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			
8:10	07.05.2024	Soil	1	BH24-07 2'		11	X	X	X		X						
8:15	07.05.2024	Soil	1	BH24-07 3'		12	X	X	X		X						
8:25	07.05.2024	Soil	1	BH24-07 4'		13	X	X	X		X						
8:35	07.05.2024	Soil	1	BH24-08 0'		14	X	X	X		X						
8:40	07.05.2024	Soil	1	BH24-08 1'		15	X	X	X		X						
8:45	07.05.2024	Soil	1	BH24-08 2'		16	X	X	X		X						
8:50	07.05.2024	Soil	1	BH24-08 3'		17	X	X	X		X						
9:00	07.05.2024	Soil	1	BH24-08 4'		18	X	X	X		X						
9:35	07.05.2024	Soil	1	BH24-02 5'		19	X	X	X		X						
9:40	07.05.2024	Soil	1	BH24-02 6'		20	X	X	X		X						

Analysis and Method

EPA Program

SDWA	CWA	RCRA

Compliance Y or N

PWSID #

Remarks

Additional Instructions: Direct bill to Tap Rock ATTN: Bill Ramsay. Please email final report to cdixon@vertexresource.com, permain@vertexresource.com

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: **L. Pullman**

Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time
L. Pullman	7-9-2024	07:00	Michelle Gonzales	7-9-24	0700
Michelle Gonzales	7-9-24	1725	A.M.	7.9.24	1725
A.M.	7.9.24	2345		7-10-24	0830
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 6 °C 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

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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Released to Imaging: 9/3/2024 11:39:55 AM
Received by OCD: 9/3/2024 11:00:09 AM

Chain of Custody

Client Information	Invoice Information	Lab Use Only		TAT				State				
Client: **Vertex (bill direct to Tap Rock)**	Company: **Tap Rock (Bill Ramsay)**	Lab WO#	Job Number	1D	2D	3D	Std	NM	CO	UT	TX	
Project Name: **Jackson Unit #003**	Address:	E407053	24015-0001		X							
Project Manager: **Chance Dixon**	City, State, Zip:											
Project Number: **24E-03316**	Phone:											
City, State, Zip:	Email:											
Phone:	Miscellaneous: **Direct bill to Tap Rock ATTN: Bill Ramsay.**											
Email: cdixon@vertexresource.com												

Sample Information

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			
10:00	07.05.2024	Soil	1	BH24-05 5'		21	X	X	X		X						

Analysis and Method

EPA Program

SDWA	CWA	RCRA

Compliance: Y or N

PWSID #:

Remarks

Additional Instructions: Direct bill to Tap Rock ATTN: Bill Ramsay. Please email final report to cdixon@vertexresource.com, permain@vertexresource.com

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: **L. Pullman**

Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time
L. Pullman	7-9-2024	07:00	Michelle Gonzales	7-9-24	0700
Michelle Gonzales	7.9.24	1725	C.M.	7.9.24	1725
C.M.	7.9.24	2345		7-10-24	0830

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 6 °C 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

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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Envirotech Analytical Laboratory

Printed: 7/10/2024 2:41:17PM

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:	07/10/24 08:30	Work Order ID:	E407053
Phone:	(575) 748-0176	Date Logged In:	07/09/24 18:05	Logged In By:	Alexa Michaels
Email:	cdixon@vertex.ca	Due Date:	07/11/24 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	Carrier: Courier
4. Was the COC complete, i.e., signatures, dates/times, requested analyses?	Yes	
5. Were all samples received within holding time? Note: Analysis, such as pH which should be conducted in the field, i.e, 15 minute hold time, are not included in this disucssion.	Yes	

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

Comments/Resolution

Jackson Unit #003 has been separated into multiple WO due to high sample volume. WO are E407052 and WO E407053.

Client Instruction

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

Date

envirotech Inc.

Report to:

Chance Dixon

5796 U.S. Hwy 64
Farmington, NM 87401

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

envirotech

Practical Solutions for a Better Tomorrow

Analytical Report

Vertex Resource Services Inc.

Project Name:	Jackson Unit #003
Work Order:	E407173
Job Number:	24015-0001
Received:	7/23/2024

Revision: 1

Report Reviewed By:

Walter Hinchman
Laboratory Director
7/29/24

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: 7/29/24

Chance Dixon
3101 Boyd Drive
Carlsbad, NM 88220

Project Name: Jackson Unit #003
Workorder: E407173
Date Received: 7/23/2024 8:30:00AM

Chance Dixon,

Thank you for choosing Envirotech, Inc. as your analytical testing laboratory for the sample(s) received on, 7/23/2024 8:30:00AM, under the Project Name: Jackson Unit #003.

The analytical test results summarized in this report with the Project Name: Jackson Unit #003 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 reguarding 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

Raina Schwanz
Laboratory Administrator
Office: 505-632-1881
rainaschwanz@envirotech-inc.com

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Lynn Jarboe
Laboratory Technical Representative
Office: 505-421-LABS(5227)
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ljarboe@envirotech-inc.com

Michelle Gonzales
Client Representative
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mgonzales@envirotech-inc.com

Envirotech Web Address: www.envirotech-inc.com

Table of Contents

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Sample Summary

Vertex Resource Services Inc.	Project Name:	Jackson Unit #003	**Reported:**
3101 Boyd Drive	Project Number:	24015-0001	
Carlsbad NM, 88220	Project Manager:	Chance Dixon	07/29/24 05:41

Client Sample ID	Lab Sample ID	Matrix	Sampled	Received	Container
BH24 - 09 0'	E407173-01A	Soil	07/19/24	07/23/24	Glass Jar, 2 oz.
BH24 - 09 2'	E407173-02A	Soil	07/19/24	07/23/24	Glass Jar, 2 oz.
BH24 - 09 4'	E407173-03A	Soil	07/19/24	07/23/24	Glass Jar, 2 oz.
BH24 - 10 0'	E407173-04A	Soil	07/19/24	07/23/24	Glass Jar, 2 oz.
BH24 - 10 2'	E407173-05A	Soil	07/19/24	07/23/24	Glass Jar, 2 oz.
BH24 - 11 0'	E407173-06A	Soil	07/19/24	07/23/24	Glass Jar, 2 oz.
BH24 - 11 2'	E407173-07A	Soil	07/19/24	07/23/24	Glass Jar, 2 oz.
BH24 - 11 4'	E407173-08A	Soil	07/19/24	07/23/24	Glass Jar, 2 oz.
BH24 - 12 0'	E407173-09A	Soil	07/19/24	07/23/24	Glass Jar, 2 oz.
BH24 - 12 2'	E407173-10A	Soil	07/19/24	07/23/24	Glass Jar, 2 oz.
BH24 - 13 0'	E407173-11A	Soil	07/19/24	07/23/24	Glass Jar, 2 oz.
BH24 - 13 2'	E407173-12A	Soil	07/19/24	07/23/24	Glass Jar, 2 oz.
BH24 - 13 4'	E407173-13A	Soil	07/19/24	07/23/24	Glass Jar, 2 oz.
BH24 - 14 0'	E407173-14A	Soil	07/19/24	07/23/24	Glass Jar, 2 oz.
BH24 - 14 2'	E407173-15A	Soil	07/19/24	07/23/24	Glass Jar, 2 oz.
BH24 - 14 4'	E407173-16A	Soil	07/19/24	07/23/24	Glass Jar, 2 oz.
BH24 - 15 0'	E407173-17A	Soil	07/19/24	07/23/24	Glass Jar, 2 oz.
BH24 - 15 2'	E407173-18A	Soil	07/19/24	07/23/24	Glass Jar, 2 oz.
BH24 - 15 4'	E407173-19A	Soil	07/19/24	07/23/24	Glass Jar, 2 oz.
BH24 - 16 0'	E407173-20A	Soil	07/19/24	07/23/24	Glass Jar, 2 oz.
BH24 - 16 2'	E407173-21A	Soil	07/19/24	07/23/24	Glass Jar, 2 oz.
BH24 - 16 4'	E407173-22A	Soil	07/19/24	07/23/24	Glass Jar, 2 oz.
BH24 - 17 0'	E407173-23A	Soil	07/19/24	07/23/24	Glass Jar, 2 oz.
BH24 - 17 2'	E407173-24A	Soil	07/19/24	07/23/24	Glass Jar, 2 oz.
BH24 - 17 4'	E407173-25A	Soil	07/19/24	07/23/24	Glass Jar, 2 oz.

Sample Data

Vertex Resource Services Inc.	Project Name:	Jackson Unit #003	
3101 Boyd Drive	Project Number:	24015-0001	**Reported:**
Carlsbad NM, 88220	Project Manager:	Chance Dixon	7/29/2024 5:41:40AM

BH24 - 09 0'

E407173-01

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organic Compounds by EPA 8260B	mg/kg	mg/kg	Analyst: IY			Batch: 2430047
Benzene	ND	0.0250	1	07/23/24	07/23/24	
Ethylbenzene	ND	0.0250	1	07/23/24	07/23/24	
Toluene	ND	0.0250	1	07/23/24	07/23/24	
o-Xylene	ND	0.0250	1	07/23/24	07/23/24	
p,m-Xylene	ND	0.0500	1	07/23/24	07/23/24	
Total Xylenes	ND	0.0250	1	07/23/24	07/23/24	
Surrogate: Bromofluorobenzene		*97.8 %*	*70-130*	*07/23/24*	*07/23/24*	
Surrogate: 1,2-Dichloroethane-d4		*97.0 %*	*70-130*	*07/23/24*	*07/23/24*	
Surrogate: Toluene-d8		*107 %*	*70-130*	*07/23/24*	*07/23/24*	
Nonhalogenated Organics by EPA 8015D - GRO	mg/kg	mg/kg	Analyst: IY			Batch: 2430047
Gasoline Range Organics (C6-C10)	ND	20.0	1	07/23/24	07/23/24	
Surrogate: Bromofluorobenzene		*97.8 %*	*70-130*	*07/23/24*	*07/23/24*	
Surrogate: 1,2-Dichloroethane-d4		*97.0 %*	*70-130*	*07/23/24*	*07/23/24*	
Surrogate: Toluene-d8		*107 %*	*70-130*	*07/23/24*	*07/23/24*	
Nonhalogenated Organics by EPA 8015D - DRO/ORO	mg/kg	mg/kg	Analyst: KM			Batch: 2430041
Diesel Range Organics (C10-C28)	ND	25.0	1	07/23/24	07/23/24	
Oil Range Organics (C28-C36)	ND	50.0	1	07/23/24	07/23/24	
Surrogate: n-Nonane		*120 %*	*50-200*	*07/23/24*	*07/23/24*	
Anions by EPA 300.0/9056A	mg/kg	mg/kg	Analyst: WF			Batch: 2430049
Chloride	ND	20.0	1	07/23/24	07/23/24	

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Sample Data

Vertex Resource Services Inc.	Project Name:	Jackson Unit #003	
3101 Boyd Drive	Project Number:	24015-0001	**Reported:**
Carlsbad NM, 88220	Project Manager:	Chance Dixon	7/29/2024 5:41:40AM

BH24 - 09 2'

E407173-02

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organic Compounds by EPA 8260B	mg/kg	mg/kg	Analyst: IY			Batch: 2430047
Benzene	ND	0.0250	1	07/23/24	07/24/24	
Ethylbenzene	ND	0.0250	1	07/23/24	07/24/24	
Toluene	ND	0.0250	1	07/23/24	07/24/24	
o-Xylene	ND	0.0250	1	07/23/24	07/24/24	
p,m-Xylene	ND	0.0500	1	07/23/24	07/24/24	
Total Xylenes	ND	0.0250	1	07/23/24	07/24/24	
Surrogate: Bromofluorobenzene		*98.7 %*	*70-130*	*07/23/24*	*07/24/24*	
Surrogate: 1,2-Dichloroethane-d4		*100 %*	*70-130*	*07/23/24*	*07/24/24*	
Surrogate: Toluene-d8		*106 %*	*70-130*	*07/23/24*	*07/24/24*	
Nonhalogenated Organics by EPA 8015D - GRO	mg/kg	mg/kg	Analyst: IY			Batch: 2430047
Gasoline Range Organics (C6-C10)	ND	20.0	1	07/23/24	07/24/24	
Surrogate: Bromofluorobenzene		*98.7 %*	*70-130*	*07/23/24*	*07/24/24*	
Surrogate: 1,2-Dichloroethane-d4		*100 %*	*70-130*	*07/23/24*	*07/24/24*	
Surrogate: Toluene-d8		*106 %*	*70-130*	*07/23/24*	*07/24/24*	
Nonhalogenated Organics by EPA 8015D - DRO/ORO	mg/kg	mg/kg	Analyst: KM			Batch: 2430041
Diesel Range Organics (C10-C28)	**45.0**	25.0	1	07/23/24	07/23/24	
Oil Range Organics (C28-C36)	ND	50.0	1	07/23/24	07/23/24	
Surrogate: n-Nonane		*64.6 %*	*50-200*	*07/23/24*	*07/23/24*	
Anions by EPA 300.0/9056A	mg/kg	mg/kg	Analyst: WF			Batch: 2430049
Chloride	ND	20.0	1	07/23/24	07/23/24	

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Sample Data

Vertex Resource Services Inc.	Project Name:	Jackson Unit #003	
3101 Boyd Drive	Project Number:	24015-0001	**Reported:**
Carlsbad NM, 88220	Project Manager:	Chance Dixon	7/29/2024 5:41:40AM

BH24 - 09 4'

E407173-03

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organic Compounds by EPA 8260B	mg/kg	mg/kg	Analyst: IY			Batch: 2430047
Benzene	ND	0.0250	1	07/23/24	07/24/24	
Ethylbenzene	ND	0.0250	1	07/23/24	07/24/24	
Toluene	ND	0.0250	1	07/23/24	07/24/24	
o-Xylene	ND	0.0250	1	07/23/24	07/24/24	
p,m-Xylene	ND	0.0500	1	07/23/24	07/24/24	
Total Xylenes	ND	0.0250	1	07/23/24	07/24/24	
Surrogate: Bromofluorobenzene		*106 %*	*70-130*	*07/23/24*	*07/24/24*	
Surrogate: 1,2-Dichloroethane-d4		*103 %*	*70-130*	*07/23/24*	*07/24/24*	
Surrogate: Toluene-d8		*104 %*	*70-130*	*07/23/24*	*07/24/24*	
Nonhalogenated Organics by EPA 8015D - GRO	mg/kg	mg/kg	Analyst: IY			Batch: 2430047
Gasoline Range Organics (C6-C10)	**51.8**	20.0	1	07/23/24	07/24/24	
Surrogate: Bromofluorobenzene		*106 %*	*70-130*	*07/23/24*	*07/24/24*	
Surrogate: 1,2-Dichloroethane-d4		*103 %*	*70-130*	*07/23/24*	*07/24/24*	
Surrogate: Toluene-d8		*104 %*	*70-130*	*07/23/24*	*07/24/24*	
Nonhalogenated Organics by EPA 8015D - DRO/ORO	mg/kg	mg/kg	Analyst: KM			Batch: 2430041
Diesel Range Organics (C10-C28)	**2880**	25.0	1	07/23/24	07/23/24	
Oil Range Organics (C28-C36)	**331**	50.0	1	07/23/24	07/23/24	
Surrogate: n-Nonane		*125 %*	*50-200*	*07/23/24*	*07/23/24*	
Anions by EPA 300.0/9056A	mg/kg	mg/kg	Analyst: WF			Batch: 2430049
Chloride	**53.7**	20.0	1	07/23/24	07/23/24	

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Sample Data

Vertex Resource Services Inc.	Project Name:	Jackson Unit #003	
3101 Boyd Drive	Project Number:	24015-0001	**Reported:**
Carlsbad NM, 88220	Project Manager:	Chance Dixon	7/29/2024 5:41:40AM

BH24 - 10 0'

E407173-04

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organic Compounds by EPA 8260B	mg/kg	mg/kg	Analyst: IY			Batch: 2430047
Benzene	ND	0.0250	1	07/23/24	07/24/24	
Ethylbenzene	ND	0.0250	1	07/23/24	07/24/24	
Toluene	ND	0.0250	1	07/23/24	07/24/24	
o-Xylene	ND	0.0250	1	07/23/24	07/24/24	
p,m-Xylene	ND	0.0500	1	07/23/24	07/24/24	
Total Xylenes	ND	0.0250	1	07/23/24	07/24/24	
Surrogate: Bromofluorobenzene		*100 %*	*70-130*	*07/23/24*	*07/24/24*	
Surrogate: 1,2-Dichloroethane-d4		*98.9 %*	*70-130*	*07/23/24*	*07/24/24*	
Surrogate: Toluene-d8		*104 %*	*70-130*	*07/23/24*	*07/24/24*	
Nonhalogenated Organics by EPA 8015D - GRO	mg/kg	mg/kg	Analyst: IY			Batch: 2430047
Gasoline Range Organics (C6-C10)	ND	20.0	1	07/23/24	07/24/24	
Surrogate: Bromofluorobenzene		*100 %*	*70-130*	*07/23/24*	*07/24/24*	
Surrogate: 1,2-Dichloroethane-d4		*98.9 %*	*70-130*	*07/23/24*	*07/24/24*	
Surrogate: Toluene-d8		*104 %*	*70-130*	*07/23/24*	*07/24/24*	
Nonhalogenated Organics by EPA 8015D - DRO/ORO	mg/kg	mg/kg	Analyst: KM			Batch: 2430041
Diesel Range Organics (C10-C28)	**26.0**	25.0	1	07/23/24	07/23/24	
Oil Range Organics (C28-C36)	ND	50.0	1	07/23/24	07/23/24	
Surrogate: n-Nonane		*125 %*	*50-200*	*07/23/24*	*07/23/24*	
Anions by EPA 300.0/9056A	mg/kg	mg/kg	Analyst: WF			Batch: 2430049
Chloride	ND	20.0	1	07/23/24	07/23/24	

envirotech Inc.

Sample Data

Vertex Resource Services Inc.	Project Name:	Jackson Unit #003	
3101 Boyd Drive	Project Number:	24015-0001	**Reported:**
Carlsbad NM, 88220	Project Manager:	Chance Dixon	7/29/2024 5:41:40AM

BH24 - 10 2'

E407173-05

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organic Compounds by EPA 8260B	mg/kg	mg/kg	Analyst: IY			Batch: 2430047
Benzene	ND	0.0250	1	07/23/24	07/24/24	
Ethylbenzene	ND	0.0250	1	07/23/24	07/24/24	
Toluene	ND	0.0250	1	07/23/24	07/24/24	
o-Xylene	ND	0.0250	1	07/23/24	07/24/24	
p,m-Xylene	ND	0.0500	1	07/23/24	07/24/24	
Total Xylenes	ND	0.0250	1	07/23/24	07/24/24	
Surrogate: Bromofluorobenzene		*96.9 %*	*70-130*	*07/23/24*	*07/24/24*	
Surrogate: 1,2-Dichloroethane-d4		*99.6 %*	*70-130*	*07/23/24*	*07/24/24*	
Surrogate: Toluene-d8		*106 %*	*70-130*	*07/23/24*	*07/24/24*	
Nonhalogenated Organics by EPA 8015D - GRO	mg/kg	mg/kg	Analyst: IY			Batch: 2430047
Gasoline Range Organics (C6-C10)	ND	20.0	1	07/23/24	07/24/24	
Surrogate: Bromofluorobenzene		*96.9 %*	*70-130*	*07/23/24*	*07/24/24*	
Surrogate: 1,2-Dichloroethane-d4		*99.6 %*	*70-130*	*07/23/24*	*07/24/24*	
Surrogate: Toluene-d8		*106 %*	*70-130*	*07/23/24*	*07/24/24*	
Nonhalogenated Organics by EPA 8015D - DRO/ORO	mg/kg	mg/kg	Analyst: KM			Batch: 2430041
Diesel Range Organics (C10-C28)	ND	25.0	1	07/23/24	07/23/24	
Oil Range Organics (C28-C36)	ND	50.0	1	07/23/24	07/23/24	
Surrogate: n-Nonane		*115 %*	*50-200*	*07/23/24*	*07/23/24*	
Anions by EPA 300.0/9056A	mg/kg	mg/kg	Analyst: WF			Batch: 2430049
Chloride	ND	20.0	1	07/23/24	07/23/24	

envirotech Inc.

Sample Data

Vertex Resource Services Inc.	Project Name:	Jackson Unit #003	
3101 Boyd Drive	Project Number:	24015-0001	**Reported:**
Carlsbad NM, 88220	Project Manager:	Chance Dixon	7/29/2024 5:41:40AM

BH24 - 11 0'

E407173-06

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organic Compounds by EPA 8260B	mg/kg	mg/kg	Analyst: IY			Batch: 2430047
Benzene	ND	0.0250	1	07/23/24	07/23/24	
Ethylbenzene	ND	0.0250	1	07/23/24	07/23/24	
Toluene	ND	0.0250	1	07/23/24	07/23/24	
o-Xylene	ND	0.0250	1	07/23/24	07/23/24	
p,m-Xylene	ND	0.0500	1	07/23/24	07/23/24	
Total Xylenes	ND	0.0250	1	07/23/24	07/23/24	
Surrogate: Bromofluorobenzene		*98.7 %*	*70-130*	*07/23/24*	*07/23/24*	
Surrogate: 1,2-Dichloroethane-d4		*102 %*	*70-130*	*07/23/24*	*07/23/24*	
Surrogate: Toluene-d8		*104 %*	*70-130*	*07/23/24*	*07/23/24*	
Nonhalogenated Organics by EPA 8015D - GRO	mg/kg	mg/kg	Analyst: IY			Batch: 2430047
Gasoline Range Organics (C6-C10)	ND	20.0	1	07/23/24	07/23/24	
Surrogate: Bromofluorobenzene		*98.7 %*	*70-130*	*07/23/24*	*07/23/24*	
Surrogate: 1,2-Dichloroethane-d4		*102 %*	*70-130*	*07/23/24*	*07/23/24*	
Surrogate: Toluene-d8		*104 %*	*70-130*	*07/23/24*	*07/23/24*	
Nonhalogenated Organics by EPA 8015D - DRO/ORO	mg/kg	mg/kg	Analyst: KM			Batch: 2430041
Diesel Range Organics (C10-C28)	ND	25.0	1	07/23/24	07/23/24	
Oil Range Organics (C28-C36)	ND	50.0	1	07/23/24	07/23/24	
Surrogate: n-Nonane		*114 %*	*50-200*	*07/23/24*	*07/23/24*	
Anions by EPA 300.0/9056A	mg/kg	mg/kg	Analyst: WF			Batch: 2430049
Chloride	**53.6**	20.0	1	07/23/24	07/23/24	

Sample Data

Vertex Resource Services Inc.	Project Name:	Jackson Unit #003	
3101 Boyd Drive	Project Number:	24015-0001	**Reported:**
Carlsbad NM, 88220	Project Manager:	Chance Dixon	7/29/2024 5:41:40AM

BH24 - 11 2'

E407173-07

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organic Compounds by EPA 8260B	mg/kg	mg/kg	Analyst: IY			Batch: 2430047
Benzene	ND	0.0250	1	07/23/24	07/24/24	
Ethylbenzene	ND	0.0250	1	07/23/24	07/24/24	
Toluene	ND	0.0250	1	07/23/24	07/24/24	
o-Xylene	ND	0.0250	1	07/23/24	07/24/24	
p,m-Xylene	ND	0.0500	1	07/23/24	07/24/24	
Total Xylenes	ND	0.0250	1	07/23/24	07/24/24	
Surrogate: Bromofluorobenzene		*96.8 %*	*70-130*	*07/23/24*	*07/24/24*	
Surrogate: 1,2-Dichloroethane-d4		*97.8 %*	*70-130*	*07/23/24*	*07/24/24*	
Surrogate: Toluene-d8		*104 %*	*70-130*	*07/23/24*	*07/24/24*	
Nonhalogenated Organics by EPA 8015D - GRO	mg/kg	mg/kg	Analyst: IY			Batch: 2430047
Gasoline Range Organics (C6-C10)	ND	20.0	1	07/23/24	07/24/24	
Surrogate: Bromofluorobenzene		*96.8 %*	*70-130*	*07/23/24*	*07/24/24*	
Surrogate: 1,2-Dichloroethane-d4		*97.8 %*	*70-130*	*07/23/24*	*07/24/24*	
Surrogate: Toluene-d8		*104 %*	*70-130*	*07/23/24*	*07/24/24*	
Nonhalogenated Organics by EPA 8015D - DRO/ORO	mg/kg	mg/kg	Analyst: KM			Batch: 2430041
Diesel Range Organics (C10-C28)	ND	25.0	1	07/23/24	07/23/24	
Oil Range Organics (C28-C36)	ND	50.0	1	07/23/24	07/23/24	
Surrogate: n-Nonane		*119 %*	*50-200*	*07/23/24*	*07/23/24*	
Anions by EPA 300.0/9056A	mg/kg	mg/kg	Analyst: WF			Batch: 2430049
Chloride	**106**	20.0	1	07/23/24	07/24/24	

envirotech Inc.

Sample Data

Vertex Resource Services Inc.	Project Name:	Jackson Unit #003	
3101 Boyd Drive	Project Number:	24015-0001	**Reported:**
Carlsbad NM, 88220	Project Manager:	Chance Dixon	7/29/2024 5:41:40AM

BH24 - 11 4'

E407173-08

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organic Compounds by EPA 8260B	mg/kg	mg/kg	Analyst: IY			Batch: 2430047
Benzene	ND	0.0250	1	07/23/24	07/24/24	
Ethylbenzene	ND	0.0250	1	07/23/24	07/24/24	
Toluene	ND	0.0250	1	07/23/24	07/24/24	
o-Xylene	ND	0.0250	1	07/23/24	07/24/24	
p,m-Xylene	ND	0.0500	1	07/23/24	07/24/24	
Total Xylenes	ND	0.0250	1	07/23/24	07/24/24	
Surrogate: Bromofluorobenzene		*99.0 %*	*70-130*	*07/23/24*	*07/24/24*	
Surrogate: 1,2-Dichloroethane-d4		*102 %*	*70-130*	*07/23/24*	*07/24/24*	
Surrogate: Toluene-d8		*105 %*	*70-130*	*07/23/24*	*07/24/24*	
Nonhalogenated Organics by EPA 8015D - GRO	mg/kg	mg/kg	Analyst: IY			Batch: 2430047
Gasoline Range Organics (C6-C10)	ND	20.0	1	07/23/24	07/24/24	
Surrogate: Bromofluorobenzene		*99.0 %*	*70-130*	*07/23/24*	*07/24/24*	
Surrogate: 1,2-Dichloroethane-d4		*102 %*	*70-130*	*07/23/24*	*07/24/24*	
Surrogate: Toluene-d8		*105 %*	*70-130*	*07/23/24*	*07/24/24*	
Nonhalogenated Organics by EPA 8015D - DRO/ORO	mg/kg	mg/kg	Analyst: KM			Batch: 2430041
Diesel Range Organics (C10-C28)	ND	25.0	1	07/23/24	07/23/24	
Oil Range Organics (C28-C36)	ND	50.0	1	07/23/24	07/23/24	
Surrogate: n-Nonane		*121 %*	*50-200*	*07/23/24*	*07/23/24*	
Anions by EPA 300.0/9056A	mg/kg	mg/kg	Analyst: WF			Batch: 2430049
Chloride	**404**	20.0	1	07/23/24	07/24/24	

envirotech Inc.

Sample Data

Vertex Resource Services Inc.	Project Name:	Jackson Unit #003	
3101 Boyd Drive	Project Number:	24015-0001	**Reported:**
Carlsbad NM, 88220	Project Manager:	Chance Dixon	7/29/2024 5:41:40AM

BH24 - 12 0'

E407173-09

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organic Compounds by EPA 8260B	mg/kg	mg/kg	Analyst: IY			Batch: 2430047
Benzene	ND	0.0250	1	07/23/24	07/24/24	
Ethylbenzene	ND	0.0250	1	07/23/24	07/24/24	
Toluene	ND	0.0250	1	07/23/24	07/24/24	
o-Xylene	ND	0.0250	1	07/23/24	07/24/24	
p,m-Xylene	ND	0.0500	1	07/23/24	07/24/24	
Total Xylenes	ND	0.0250	1	07/23/24	07/24/24	
Surrogate: Bromofluorobenzene		*99.5 %*	*70-130*	*07/23/24*	*07/24/24*	
Surrogate: 1,2-Dichloroethane-d4		*99.7 %*	*70-130*	*07/23/24*	*07/24/24*	
Surrogate: Toluene-d8		*106 %*	*70-130*	*07/23/24*	*07/24/24*	
Nonhalogenated Organics by EPA 8015D - GRO	mg/kg	mg/kg	Analyst: IY			Batch: 2430047
Gasoline Range Organics (C6-C10)	ND	20.0	1	07/23/24	07/24/24	
Surrogate: Bromofluorobenzene		*99.5 %*	*70-130*	*07/23/24*	*07/24/24*	
Surrogate: 1,2-Dichloroethane-d4		*99.7 %*	*70-130*	*07/23/24*	*07/24/24*	
Surrogate: Toluene-d8		*106 %*	*70-130*	*07/23/24*	*07/24/24*	
Nonhalogenated Organics by EPA 8015D - DRO/ORO	mg/kg	mg/kg	Analyst: KM			Batch: 2430041
Diesel Range Organics (C10-C28)	ND	25.0	1	07/23/24	07/24/24	
Oil Range Organics (C28-C36)	ND	50.0	1	07/23/24	07/24/24	
Surrogate: n-Nonane		*116 %*	*50-200*	*07/23/24*	*07/24/24*	
Anions by EPA 300.0/9056A	mg/kg	mg/kg	Analyst: WF			Batch: 2430049
Chloride	**48.5**	20.0	1	07/23/24	07/24/24	

envirotech Inc.

Sample Data

Vertex Resource Services Inc.	Project Name:	Jackson Unit #003	
3101 Boyd Drive	Project Number:	24015-0001	**Reported:**
Carlsbad NM, 88220	Project Manager:	Chance Dixon	7/29/2024 5:41:40AM

BH24 - 12 2'

E407173-10

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organic Compounds by EPA 8260B	mg/kg	mg/kg	Analyst: IY			Batch: 2430047
Benzene	ND	0.0250	1	07/23/24	07/24/24	
Ethylbenzene	ND	0.0250	1	07/23/24	07/24/24	
Toluene	ND	0.0250	1	07/23/24	07/24/24	
o-Xylene	ND	0.0250	1	07/23/24	07/24/24	
p,m-Xylene	ND	0.0500	1	07/23/24	07/24/24	
Total Xylenes	ND	0.0250	1	07/23/24	07/24/24	
Surrogate: Bromofluorobenzene		*99.1 %*	*70-130*	*07/23/24*	*07/24/24*	
Surrogate: 1,2-Dichloroethane-d4		*99.5 %*	*70-130*	*07/23/24*	*07/24/24*	
Surrogate: Toluene-d8		*107 %*	*70-130*	*07/23/24*	*07/24/24*	
Nonhalogenated Organics by EPA 8015D - GRO	mg/kg	mg/kg	Analyst: IY			Batch: 2430047
Gasoline Range Organics (C6-C10)	ND	20.0	1	07/23/24	07/24/24	
Surrogate: Bromofluorobenzene		*99.1 %*	*70-130*	*07/23/24*	*07/24/24*	
Surrogate: 1,2-Dichloroethane-d4		*99.5 %*	*70-130*	*07/23/24*	*07/24/24*	
Surrogate: Toluene-d8		*107 %*	*70-130*	*07/23/24*	*07/24/24*	
Nonhalogenated Organics by EPA 8015D - DRO/ORO	mg/kg	mg/kg	Analyst: KM			Batch: 2430041
Diesel Range Organics (C10-C28)	ND	25.0	1	07/23/24	07/24/24	
Oil Range Organics (C28-C36)	ND	50.0	1	07/23/24	07/24/24	
Surrogate: n-Nonane		*117 %*	*50-200*	*07/23/24*	*07/24/24*	
Anions by EPA 300.0/9056A	mg/kg	mg/kg	Analyst: WF			Batch: 2430049
Chloride	**76.5**	20.0	1	07/23/24	07/24/24	

Sample Data

Vertex Resource Services Inc.	Project Name:	Jackson Unit #003	
3101 Boyd Drive	Project Number:	24015-0001	**Reported:**
Carlsbad NM, 88220	Project Manager:	Chance Dixon	7/29/2024 5:41:40AM

BH24 - 13 0'

E407173-11

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organic Compounds by EPA 8260B	mg/kg	mg/kg	Analyst: IY			Batch: 2430047
Benzene	ND	0.0250	1	07/23/24	07/24/24	
Ethylbenzene	ND	0.0250	1	07/23/24	07/24/24	
Toluene	ND	0.0250	1	07/23/24	07/24/24	
o-Xylene	ND	0.0250	1	07/23/24	07/24/24	
p,m-Xylene	ND	0.0500	1	07/23/24	07/24/24	
Total Xylenes	ND	0.0250	1	07/23/24	07/24/24	
Surrogate: Bromofluorobenzene		*97.6 %*	*70-130*	*07/23/24*	*07/24/24*	
Surrogate: 1,2-Dichloroethane-d4		*97.8 %*	*70-130*	*07/23/24*	*07/24/24*	
Surrogate: Toluene-d8		*104 %*	*70-130*	*07/23/24*	*07/24/24*	
Nonhalogenated Organics by EPA 8015D - GRO	mg/kg	mg/kg	Analyst: IY			Batch: 2430047
Gasoline Range Organics (C6-C10)	ND	20.0	1	07/23/24	07/24/24	
Surrogate: Bromofluorobenzene		*97.6 %*	*70-130*	*07/23/24*	*07/24/24*	
Surrogate: 1,2-Dichloroethane-d4		*97.8 %*	*70-130*	*07/23/24*	*07/24/24*	
Surrogate: Toluene-d8		*104 %*	*70-130*	*07/23/24*	*07/24/24*	
Nonhalogenated Organics by EPA 8015D - DRO/ORO	mg/kg	mg/kg	Analyst: KM			Batch: 2430041
Diesel Range Organics (C10-C28)	ND	25.0	1	07/23/24	07/24/24	
Oil Range Organics (C28-C36)	ND	50.0	1	07/23/24	07/24/24	
Surrogate: n-Nonane		*121 %*	*50-200*	*07/23/24*	*07/24/24*	
Anions by EPA 300.0/9056A	mg/kg	mg/kg	Analyst: WF			Batch: 2430049
Chloride	ND	20.0	1	07/23/24	07/24/24	

envirotech Inc.

Sample Data

Vertex Resource Services Inc.	Project Name:	Jackson Unit #003	
3101 Boyd Drive	Project Number:	24015-0001	**Reported:**
Carlsbad NM, 88220	Project Manager:	Chance Dixon	7/29/2024 5:41:40AM

BH24 - 13 2'

E407173-12

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organic Compounds by EPA 8260B	mg/kg	mg/kg	Analyst: IY			Batch: 2430047
Benzene	ND	0.0250	1	07/23/24	07/24/24	
Ethylbenzene	ND	0.0250	1	07/23/24	07/24/24	
Toluene	ND	0.0250	1	07/23/24	07/24/24	
o-Xylene	ND	0.0250	1	07/23/24	07/24/24	
p,m-Xylene	ND	0.0500	1	07/23/24	07/24/24	
Total Xylenes	ND	0.0250	1	07/23/24	07/24/24	
Surrogate: Bromofluorobenzene		*95.0 %*	*70-130*	*07/23/24*	*07/24/24*	
Surrogate: 1,2-Dichloroethane-d4		*96.4 %*	*70-130*	*07/23/24*	*07/24/24*	
Surrogate: Toluene-d8		*107 %*	*70-130*	*07/23/24*	*07/24/24*	
Nonhalogenated Organics by EPA 8015D - GRO	mg/kg	mg/kg	Analyst: IY			Batch: 2430047
Gasoline Range Organics (C6-C10)	ND	20.0	1	07/23/24	07/24/24	
Surrogate: Bromofluorobenzene		*95.0 %*	*70-130*	*07/23/24*	*07/24/24*	
Surrogate: 1,2-Dichloroethane-d4		*96.4 %*	*70-130*	*07/23/24*	*07/24/24*	
Surrogate: Toluene-d8		*107 %*	*70-130*	*07/23/24*	*07/24/24*	
Nonhalogenated Organics by EPA 8015D - DRO/ORO	mg/kg	mg/kg	Analyst: KM			Batch: 2430041
Diesel Range Organics (C10-C28)	ND	25.0	1	07/23/24	07/24/24	
Oil Range Organics (C28-C36)	ND	50.0	1	07/23/24	07/24/24	
Surrogate: n-Nonane		*122 %*	*50-200*	*07/23/24*	*07/24/24*	
Anions by EPA 300.0/9056A	mg/kg	mg/kg	Analyst: WF			Batch: 2430049
Chloride	**34.5**	20.0	1	07/23/24	07/24/24	

envirotech Inc.

Sample Data

Vertex Resource Services Inc.	Project Name:	Jackson Unit #003	
3101 Boyd Drive	Project Number:	24015-0001	**Reported:**
Carlsbad NM, 88220	Project Manager:	Chance Dixon	7/29/2024 5:41:40AM

BH24 - 13 4'

E407173-13

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organic Compounds by EPA 8260B	mg/kg	mg/kg	Analyst: IY			Batch: 2430047
Benzene	ND	0.0250	1	07/23/24	07/24/24	
Ethylbenzene	ND	0.0250	1	07/23/24	07/24/24	
Toluene	ND	0.0250	1	07/23/24	07/24/24	
o-Xylene	ND	0.0250	1	07/23/24	07/24/24	
p,m-Xylene	ND	0.0500	1	07/23/24	07/24/24	
Total Xylenes	ND	0.0250	1	07/23/24	07/24/24	
Surrogate: Bromofluorobenzene		*97.4 %*	*70-130*	*07/23/24*	*07/24/24*	
Surrogate: 1,2-Dichloroethane-d4		*96.8 %*	*70-130*	*07/23/24*	*07/24/24*	
Surrogate: Toluene-d8		*105 %*	*70-130*	*07/23/24*	*07/24/24*	
Nonhalogenated Organics by EPA 8015D - GRO	mg/kg	mg/kg	Analyst: IY			Batch: 2430047
Gasoline Range Organics (C6-C10)	ND	20.0	1	07/23/24	07/24/24	
Surrogate: Bromofluorobenzene		*97.4 %*	*70-130*	*07/23/24*	*07/24/24*	
Surrogate: 1,2-Dichloroethane-d4		*96.8 %*	*70-130*	*07/23/24*	*07/24/24*	
Surrogate: Toluene-d8		*105 %*	*70-130*	*07/23/24*	*07/24/24*	
Nonhalogenated Organics by EPA 8015D - DRO/ORO	mg/kg	mg/kg	Analyst: KM			Batch: 2430041
Diesel Range Organics (C10-C28)	ND	25.0	1	07/23/24	07/24/24	
Oil Range Organics (C28-C36)	ND	50.0	1	07/23/24	07/24/24	
Surrogate: n-Nonane		*115 %*	*50-200*	*07/23/24*	*07/24/24*	
Anions by EPA 300.0/9056A	mg/kg	mg/kg	Analyst: WF			Batch: 2430049
Chloride	**66.3**	20.0	1	07/23/24	07/24/24	

Sample Data

Vertex Resource Services Inc.	Project Name:	Jackson Unit #003	
3101 Boyd Drive	Project Number:	24015-0001	**Reported:**
Carlsbad NM, 88220	Project Manager:	Chance Dixon	7/29/2024 5:41:40AM

BH24 - 14 0'

E407173-14

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organic Compounds by EPA 8260B	mg/kg	mg/kg	Analyst: IY			Batch: 2430047
Benzene	ND	0.0250	1	07/23/24	07/24/24	
Ethylbenzene	ND	0.0250	1	07/23/24	07/24/24	
Toluene	ND	0.0250	1	07/23/24	07/24/24	
o-Xylene	ND	0.0250	1	07/23/24	07/24/24	
p,m-Xylene	ND	0.0500	1	07/23/24	07/24/24	
Total Xylenes	ND	0.0250	1	07/23/24	07/24/24	
Surrogate: Bromofluorobenzene		*96.6 %*	*70-130*	*07/23/24*	*07/24/24*	
Surrogate: 1,2-Dichloroethane-d4		*96.9 %*	*70-130*	*07/23/24*	*07/24/24*	
Surrogate: Toluene-d8		*106 %*	*70-130*	*07/23/24*	*07/24/24*	
Nonhalogenated Organics by EPA 8015D - GRO	mg/kg	mg/kg	Analyst: IY			Batch: 2430047
Gasoline Range Organics (C6-C10)	ND	20.0	1	07/23/24	07/24/24	
Surrogate: Bromofluorobenzene		*96.6 %*	*70-130*	*07/23/24*	*07/24/24*	
Surrogate: 1,2-Dichloroethane-d4		*96.9 %*	*70-130*	*07/23/24*	*07/24/24*	
Surrogate: Toluene-d8		*106 %*	*70-130*	*07/23/24*	*07/24/24*	
Nonhalogenated Organics by EPA 8015D - DRO/ORO	mg/kg	mg/kg	Analyst: KM			Batch: 2430041
Diesel Range Organics (C10-C28)	ND	25.0	1	07/23/24	07/24/24	
Oil Range Organics (C28-C36)	ND	50.0	1	07/23/24	07/24/24	
Surrogate: n-Nonane		*116 %*	*50-200*	*07/23/24*	*07/24/24*	
Anions by EPA 300.0/9056A	mg/kg	mg/kg	Analyst: WF			Batch: 2430049
Chloride	ND	20.0	1	07/23/24	07/24/24	

envirotech Inc.

Sample Data

Vertex Resource Services Inc.	Project Name:	Jackson Unit #003	
3101 Boyd Drive	Project Number:	24015-0001	**Reported:**
Carlsbad NM, 88220	Project Manager:	Chance Dixon	7/29/2024 5:41:40AM

BH24 - 14 2'

E407173-15

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organic Compounds by EPA 8260B	mg/kg	mg/kg	Analyst: IY			Batch: 2430047
Benzene	ND	0.0250	1	07/23/24	07/24/24	
Ethylbenzene	ND	0.0250	1	07/23/24	07/24/24	
Toluene	ND	0.0250	1	07/23/24	07/24/24	
o-Xylene	ND	0.0250	1	07/23/24	07/24/24	
p,m-Xylene	ND	0.0500	1	07/23/24	07/24/24	
Total Xylenes	ND	0.0250	1	07/23/24	07/24/24	
Surrogate: Bromofluorobenzene		*97.6 %*	*70-130*	*07/23/24*	*07/24/24*	
Surrogate: 1,2-Dichloroethane-d4		*96.8 %*	*70-130*	*07/23/24*	*07/24/24*	
Surrogate: Toluene-d8		*107 %*	*70-130*	*07/23/24*	*07/24/24*	
Nonhalogenated Organics by EPA 8015D - GRO	mg/kg	mg/kg	Analyst: IY			Batch: 2430047
Gasoline Range Organics (C6-C10)	ND	20.0	1	07/23/24	07/24/24	
Surrogate: Bromofluorobenzene		*97.6 %*	*70-130*	*07/23/24*	*07/24/24*	
Surrogate: 1,2-Dichloroethane-d4		*96.8 %*	*70-130*	*07/23/24*	*07/24/24*	
Surrogate: Toluene-d8		*107 %*	*70-130*	*07/23/24*	*07/24/24*	
Nonhalogenated Organics by EPA 8015D - DRO/ORO	mg/kg	mg/kg	Analyst: KM			Batch: 2430041
Diesel Range Organics (C10-C28)	ND	25.0	1	07/23/24	07/24/24	
Oil Range Organics (C28-C36)	ND	50.0	1	07/23/24	07/24/24	
Surrogate: n-Nonane		*117 %*	*50-200*	*07/23/24*	*07/24/24*	
Anions by EPA 300.0/9056A	mg/kg	mg/kg	Analyst: WF			Batch: 2430049
Chloride	**35.0**	20.0	1	07/23/24	07/24/24	

envirotech Inc.

Sample Data

Vertex Resource Services Inc.	Project Name:	Jackson Unit #003	
3101 Boyd Drive	Project Number:	24015-0001	**Reported:**
Carlsbad NM, 88220	Project Manager:	Chance Dixon	7/29/2024 5:41:40AM

BH24 - 14 4'

E407173-16

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organic Compounds by EPA 8260B	mg/kg	mg/kg	Analyst: IY			Batch: 2430047
Benzene	ND	0.0250	1	07/23/24	07/24/24	
Ethylbenzene	ND	0.0250	1	07/23/24	07/24/24	
Toluene	ND	0.0250	1	07/23/24	07/24/24	
o-Xylene	ND	0.0250	1	07/23/24	07/24/24	
p,m-Xylene	ND	0.0500	1	07/23/24	07/24/24	
Total Xylenes	ND	0.0250	1	07/23/24	07/24/24	
Surrogate: Bromofluorobenzene		*98.6 %*	*70-130*	*07/23/24*	*07/24/24*	
Surrogate: 1,2-Dichloroethane-d4		*101 %*	*70-130*	*07/23/24*	*07/24/24*	
Surrogate: Toluene-d8		*107 %*	*70-130*	*07/23/24*	*07/24/24*	
Nonhalogenated Organics by EPA 8015D - GRO	mg/kg	mg/kg	Analyst: IY			Batch: 2430047
Gasoline Range Organics (C6-C10)	ND	20.0	1	07/23/24	07/24/24	
Surrogate: Bromofluorobenzene		*98.6 %*	*70-130*	*07/23/24*	*07/24/24*	
Surrogate: 1,2-Dichloroethane-d4		*101 %*	*70-130*	*07/23/24*	*07/24/24*	
Surrogate: Toluene-d8		*107 %*	*70-130*	*07/23/24*	*07/24/24*	
Nonhalogenated Organics by EPA 8015D - DRO/ORO	mg/kg	mg/kg	Analyst: KM			Batch: 2430041
Diesel Range Organics (C10-C28)	ND	25.0	1	07/23/24	07/24/24	
Oil Range Organics (C28-C36)	ND	50.0	1	07/23/24	07/24/24	
Surrogate: n-Nonane		*120 %*	*50-200*	*07/23/24*	*07/24/24*	
Anions by EPA 300.0/9056A	mg/kg	mg/kg	Analyst: WF			Batch: 2430049
Chloride	**72.6**	20.0	1	07/23/24	07/24/24	

envirotech Inc.

Sample Data

Vertex Resource Services Inc.	Project Name:	Jackson Unit #003	
3101 Boyd Drive	Project Number:	24015-0001	**Reported:**
Carlsbad NM, 88220	Project Manager:	Chance Dixon	7/29/2024 5:41:40AM

BH24 - 15 0'

E407173-17

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organic Compounds by EPA 8260B	mg/kg	mg/kg	Analyst: IY			Batch: 2430047
Benzene	ND	0.0250	1	07/23/24	07/24/24	
Ethylbenzene	ND	0.0250	1	07/23/24	07/24/24	
Toluene	ND	0.0250	1	07/23/24	07/24/24	
o-Xylene	ND	0.0250	1	07/23/24	07/24/24	
p,m-Xylene	ND	0.0500	1	07/23/24	07/24/24	
Total Xylenes	ND	0.0250	1	07/23/24	07/24/24	
Surrogate: Bromofluorobenzene		*100 %*	*70-130*	*07/23/24*	*07/24/24*	
Surrogate: 1,2-Dichloroethane-d4		*95.7 %*	*70-130*	*07/23/24*	*07/24/24*	
Surrogate: Toluene-d8		*108 %*	*70-130*	*07/23/24*	*07/24/24*	
Nonhalogenated Organics by EPA 8015D - GRO	mg/kg	mg/kg	Analyst: IY			Batch: 2430047
Gasoline Range Organics (C6-C10)	ND	20.0	1	07/23/24	07/24/24	
Surrogate: Bromofluorobenzene		*100 %*	*70-130*	*07/23/24*	*07/24/24*	
Surrogate: 1,2-Dichloroethane-d4		*95.7 %*	*70-130*	*07/23/24*	*07/24/24*	
Surrogate: Toluene-d8		*108 %*	*70-130*	*07/23/24*	*07/24/24*	
Nonhalogenated Organics by EPA 8015D - DRO/ORO	mg/kg	mg/kg	Analyst: KM			Batch: 2430041
Diesel Range Organics (C10-C28)	ND	25.0	1	07/23/24	07/24/24	
Oil Range Organics (C28-C36)	ND	50.0	1	07/23/24	07/24/24	
Surrogate: n-Nonane		*120 %*	*50-200*	*07/23/24*	*07/24/24*	
Anions by EPA 300.0/9056A	mg/kg	mg/kg	Analyst: WF			Batch: 2430049
Chloride	ND	20.0	1	07/23/24	07/24/24	

envirotech Inc.

Sample Data

Vertex Resource Services Inc.	Project Name:	Jackson Unit #003	
3101 Boyd Drive	Project Number:	24015-0001	**Reported:**
Carlsbad NM, 88220	Project Manager:	Chance Dixon	7/29/2024 5:41:40AM

BH24 - 15 2'

E407173-18

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organic Compounds by EPA 8260B	mg/kg	mg/kg	Analyst: IY			Batch: 2430047
Benzene	ND	0.0250	1	07/23/24	07/24/24	
Ethylbenzene	ND	0.0250	1	07/23/24	07/24/24	
Toluene	ND	0.0250	1	07/23/24	07/24/24	
o-Xylene	ND	0.0250	1	07/23/24	07/24/24	
p,m-Xylene	ND	0.0500	1	07/23/24	07/24/24	
Total Xylenes	ND	0.0250	1	07/23/24	07/24/24	
Surrogate: Bromofluorobenzene		*99.2 %*	*70-130*	*07/23/24*	*07/24/24*	
Surrogate: 1,2-Dichloroethane-d4		*98.2 %*	*70-130*	*07/23/24*	*07/24/24*	
Surrogate: Toluene-d8		*106 %*	*70-130*	*07/23/24*	*07/24/24*	
Nonhalogenated Organics by EPA 8015D - GRO	mg/kg	mg/kg	Analyst: IY			Batch: 2430047
Gasoline Range Organics (C6-C10)	ND	20.0	1	07/23/24	07/24/24	
Surrogate: Bromofluorobenzene		*99.2 %*	*70-130*	*07/23/24*	*07/24/24*	
Surrogate: 1,2-Dichloroethane-d4		*98.2 %*	*70-130*	*07/23/24*	*07/24/24*	
Surrogate: Toluene-d8		*106 %*	*70-130*	*07/23/24*	*07/24/24*	
Nonhalogenated Organics by EPA 8015D - DRO/ORO	mg/kg	mg/kg	Analyst: KM			Batch: 2430041
Diesel Range Organics (C10-C28)	ND	25.0	1	07/23/24	07/24/24	
Oil Range Organics (C28-C36)	ND	50.0	1	07/23/24	07/24/24	
Surrogate: n-Nonane		*126 %*	*50-200*	*07/23/24*	*07/24/24*	
Anions by EPA 300.0/9056A	mg/kg	mg/kg	Analyst: WF			Batch: 2430049
Chloride	ND	20.0	1	07/23/24	07/24/24	

Sample Data

Vertex Resource Services Inc.	Project Name:	Jackson Unit #003	
3101 Boyd Drive	Project Number:	24015-0001	**Reported:**
Carlsbad NM, 88220	Project Manager:	Chance Dixon	7/29/2024 5:41:40AM

BH24 - 15 4'

E407173-19

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organic Compounds by EPA 8260B	mg/kg	mg/kg	Analyst: IY			Batch: 2430047
Benzene	ND	0.0250	1	07/23/24	07/24/24	
Ethylbenzene	ND	0.0250	1	07/23/24	07/24/24	
Toluene	ND	0.0250	1	07/23/24	07/24/24	
o-Xylene	ND	0.0250	1	07/23/24	07/24/24	
p,m-Xylene	ND	0.0500	1	07/23/24	07/24/24	
Total Xylenes	ND	0.0250	1	07/23/24	07/24/24	
Surrogate: Bromofluorobenzene		*97.2 %*	*70-130*	*07/23/24*	*07/24/24*	
Surrogate: 1,2-Dichloroethane-d4		*100 %*	*70-130*	*07/23/24*	*07/24/24*	
Surrogate: Toluene-d8		*106 %*	*70-130*	*07/23/24*	*07/24/24*	
Nonhalogenated Organics by EPA 8015D - GRO	mg/kg	mg/kg	Analyst: IY			Batch: 2430047
Gasoline Range Organics (C6-C10)	ND	20.0	1	07/23/24	07/24/24	
Surrogate: Bromofluorobenzene		*97.2 %*	*70-130*	*07/23/24*	*07/24/24*	
Surrogate: 1,2-Dichloroethane-d4		*100 %*	*70-130*	*07/23/24*	*07/24/24*	
Surrogate: Toluene-d8		*106 %*	*70-130*	*07/23/24*	*07/24/24*	
Nonhalogenated Organics by EPA 8015D - DRO/ORO	mg/kg	mg/kg	Analyst: KM			Batch: 2430041
Diesel Range Organics (C10-C28)	ND	25.0	1	07/23/24	07/24/24	
Oil Range Organics (C28-C36)	ND	50.0	1	07/23/24	07/24/24	
Surrogate: n-Nonane		*122 %*	*50-200*	*07/23/24*	*07/24/24*	
Anions by EPA 300.0/9056A	mg/kg	mg/kg	Analyst: WF			Batch: 2430049
Chloride	**109**	20.0	1	07/23/24	07/24/24	

Sample Data

Vertex Resource Services Inc.	Project Name:	Jackson Unit #003	
3101 Boyd Drive	Project Number:	24015-0001	**Reported:**
Carlsbad NM, 88220	Project Manager:	Chance Dixon	7/29/2024 5:41:40AM

BH24 - 16 0'

E407173-20

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organic Compounds by EPA 8260B	mg/kg	mg/kg	Analyst: IY			Batch: 2430047
Benzene	ND	0.0250	1	07/23/24	07/24/24	
Ethylbenzene	ND	0.0250	1	07/23/24	07/24/24	
Toluene	ND	0.0250	1	07/23/24	07/24/24	
o-Xylene	ND	0.0250	1	07/23/24	07/24/24	
p,m-Xylene	ND	0.0500	1	07/23/24	07/24/24	
Total Xylenes	ND	0.0250	1	07/23/24	07/24/24	
Surrogate: Bromofluorobenzene		*98.5 %*	*70-130*	*07/23/24*	*07/24/24*	
Surrogate: 1,2-Dichloroethane-d4		*100 %*	*70-130*	*07/23/24*	*07/24/24*	
Surrogate: Toluene-d8		*107 %*	*70-130*	*07/23/24*	*07/24/24*	
Nonhalogenated Organics by EPA 8015D - GRO	mg/kg	mg/kg	Analyst: IY			Batch: 2430047
Gasoline Range Organics (C6-C10)	ND	20.0	1	07/23/24	07/24/24	
Surrogate: Bromofluorobenzene		*98.5 %*	*70-130*	*07/23/24*	*07/24/24*	
Surrogate: 1,2-Dichloroethane-d4		*100 %*	*70-130*	*07/23/24*	*07/24/24*	
Surrogate: Toluene-d8		*107 %*	*70-130*	*07/23/24*	*07/24/24*	
Nonhalogenated Organics by EPA 8015D - DRO/ORO	mg/kg	mg/kg	Analyst: KM			Batch: 2430041
Diesel Range Organics (C10-C28)	ND	25.0	1	07/23/24	07/24/24	
Oil Range Organics (C28-C36)	ND	50.0	1	07/23/24	07/24/24	
Surrogate: n-Nonane		*126 %*	*50-200*	*07/23/24*	*07/24/24*	
Anions by EPA 300.0/9056A	mg/kg	mg/kg	Analyst: WF			Batch: 2430049
Chloride	**117**	20.0	1	07/23/24	07/24/24	

Sample Data

Vertex Resource Services Inc.	Project Name:	Jackson Unit #003	
3101 Boyd Drive	Project Number:	24015-0001	**Reported:**
Carlsbad NM, 88220	Project Manager:	Chance Dixon	7/29/2024 5:41:40AM

BH24 - 16 2'

E407173-21

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organics by EPA 8021B	mg/kg	mg/kg	Analyst: CG			Batch: 2430045
Benzene	ND	0.0250	1	07/23/24	07/23/24	
Ethylbenzene	ND	0.0250	1	07/23/24	07/23/24	
Toluene	ND	0.0250	1	07/23/24	07/23/24	
o-Xylene	ND	0.0250	1	07/23/24	07/23/24	
p,m-Xylene	ND	0.0500	1	07/23/24	07/23/24	
Total Xylenes	ND	0.0250	1	07/23/24	07/23/24	
Surrogate: 4-Bromochlorobenzene-PID		*91.3 %*	*70-130*	*07/23/24*	*07/23/24*	
Nonhalogenated Organics by EPA 8015D - GRO	mg/kg	mg/kg	Analyst: CG			Batch: 2430045
Gasoline Range Organics (C6-C10)	ND	20.0	1	07/23/24	07/23/24	
Surrogate: 1-Chloro-4-fluorobenzene-FID		*95.7 %*	*70-130*	*07/23/24*	*07/23/24*	
Nonhalogenated Organics by EPA 8015D - DRO/ORO	mg/kg	mg/kg	Analyst: NV			Batch: 2430040
Diesel Range Organics (C10-C28)	ND	25.0	1	07/23/24	07/24/24	
Oil Range Organics (C28-C36)	ND	50.0	1	07/23/24	07/24/24	
Surrogate: n-Nonane		*81.8 %*	*50-200*	*07/23/24*	*07/24/24*	
Anions by EPA 300.0/9056A	mg/kg	mg/kg	Analyst: JM			Batch: 2430048
Chloride	**280**	20.0	1	07/23/24	07/23/24	

Sample Data

Vertex Resource Services Inc.	Project Name:	Jackson Unit #003	
3101 Boyd Drive	Project Number:	24015-0001	**Reported:**
Carlsbad NM, 88220	Project Manager:	Chance Dixon	7/29/2024 5:41:40AM

BH24 - 16 4'

E407173-22

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organics by EPA 8021B	mg/kg	mg/kg	Analyst: CG			Batch: 2430045
Benzene	ND	0.0250	1	07/23/24	07/23/24	
Ethylbenzene	ND	0.0250	1	07/23/24	07/23/24	
Toluene	ND	0.0250	1	07/23/24	07/23/24	
o-Xylene	ND	0.0250	1	07/23/24	07/23/24	
p,m-Xylene	ND	0.0500	1	07/23/24	07/23/24	
Total Xylenes	ND	0.0250	1	07/23/24	07/23/24	
Surrogate: 4-Bromochlorobenzene-PID		*91.7 %*	*70-130*	*07/23/24*	*07/23/24*	
Nonhalogenated Organics by EPA 8015D - GRO	mg/kg	mg/kg	Analyst: CG			Batch: 2430045
Gasoline Range Organics (C6-C10)	ND	20.0	1	07/23/24	07/23/24	
Surrogate: 1-Chloro-4-fluorobenzene-FID		*96.7 %*	*70-130*	*07/23/24*	*07/23/24*	
Nonhalogenated Organics by EPA 8015D - DRO/ORO	mg/kg	mg/kg	Analyst: NV			Batch: 2430040
Diesel Range Organics (C10-C28)	ND	25.0	1	07/23/24	07/24/24	
Oil Range Organics (C28-C36)	ND	50.0	1	07/23/24	07/24/24	
Surrogate: n-Nonane		*85.0 %*	*50-200*	*07/23/24*	*07/24/24*	
Anions by EPA 300.0/9056A	mg/kg	mg/kg	Analyst: JM			Batch: 2430048
Chloride	**289**	20.0	1	07/23/24	07/23/24	

Sample Data

Vertex Resource Services Inc.	Project Name:	Jackson Unit #003	
3101 Boyd Drive	Project Number:	24015-0001	**Reported:**
Carlsbad NM, 88220	Project Manager:	Chance Dixon	7/29/2024 5:41:40AM

BH24 - 17 0'

E407173-23

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organics by EPA 8021B	mg/kg	mg/kg	Analyst: CG			Batch: 2430045
Benzene	ND	0.0250	1	07/23/24	07/23/24	
Ethylbenzene	ND	0.0250	1	07/23/24	07/23/24	
Toluene	ND	0.0250	1	07/23/24	07/23/24	
o-Xylene	ND	0.0250	1	07/23/24	07/23/24	
p,m-Xylene	ND	0.0500	1	07/23/24	07/23/24	
Total Xylenes	ND	0.0250	1	07/23/24	07/23/24	
Surrogate: 4-Bromochlorobenzene-PID		*90.9 %*	*70-130*	*07/23/24*	*07/23/24*	
Nonhalogenated Organics by EPA 8015D - GRO	mg/kg	mg/kg	Analyst: CG			Batch: 2430045
Gasoline Range Organics (C6-C10)	ND	20.0	1	07/23/24	07/23/24	
Surrogate: 1-Chloro-4-fluorobenzene-FID		*96.4 %*	*70-130*	*07/23/24*	*07/23/24*	
Nonhalogenated Organics by EPA 8015D - DRO/ORO	mg/kg	mg/kg	Analyst: NV			Batch: 2430040
Diesel Range Organics (C10-C28)	ND	25.0	1	07/23/24	07/24/24	
Oil Range Organics (C28-C36)	ND	50.0	1	07/23/24	07/24/24	
Surrogate: n-Nonane		*77.9 %*	*50-200*	*07/23/24*	*07/24/24*	
Anions by EPA 300.0/9056A	mg/kg	mg/kg	Analyst: JM			Batch: 2430048
Chloride	ND	20.0	1	07/23/24	07/23/24	

Sample Data

Vertex Resource Services Inc.	Project Name:	Jackson Unit #003	
3101 Boyd Drive	Project Number:	24015-0001	**Reported:**
Carlsbad NM, 88220	Project Manager:	Chance Dixon	7/29/2024 5:41:40AM

BH24 - 17 2'

E407173-24

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organics by EPA 8021B	mg/kg	mg/kg	Analyst: CG			Batch: 2430045
Benzene	ND	0.0250	1	07/23/24	07/23/24	
Ethylbenzene	ND	0.0250	1	07/23/24	07/23/24	
Toluene	ND	0.0250	1	07/23/24	07/23/24	
o-Xylene	ND	0.0250	1	07/23/24	07/23/24	
p,m-Xylene	ND	0.0500	1	07/23/24	07/23/24	
Total Xylenes	ND	0.0250	1	07/23/24	07/23/24	
Surrogate: 4-Bromochlorobenzene-PID		*93.2 %*	*70-130*	*07/23/24*	*07/23/24*	
Nonhalogenated Organics by EPA 8015D - GRO	mg/kg	mg/kg	Analyst: CG			Batch: 2430045
Gasoline Range Organics (C6-C10)	ND	20.0	1	07/23/24	07/23/24	
Surrogate: 1-Chloro-4-fluorobenzene-FID		*95.2 %*	*70-130*	*07/23/24*	*07/23/24*	
Nonhalogenated Organics by EPA 8015D - DRO/ORO	mg/kg	mg/kg	Analyst: NV			Batch: 2430040
Diesel Range Organics (C10-C28)	ND	25.0	1	07/23/24	07/24/24	
Oil Range Organics (C28-C36)	ND	50.0	1	07/23/24	07/24/24	
Surrogate: n-Nonane		*73.8 %*	*50-200*	*07/23/24*	*07/24/24*	
Anions by EPA 300.0/9056A	mg/kg	mg/kg	Analyst: JM			Batch: 2430048
Chloride	ND	20.0	1	07/23/24	07/23/24	

Sample Data

Vertex Resource Services Inc.	Project Name:	Jackson Unit #003	
3101 Boyd Drive	Project Number:	24015-0001	**Reported:**
Carlsbad NM, 88220	Project Manager:	Chance Dixon	7/29/2024 5:41:40AM

BH24 - 17 4'

E407173-25

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organics by EPA 8021B	mg/kg	mg/kg	Analyst: CG			Batch: 2430045
Benzene	ND	0.0250	1	07/23/24	07/23/24	
Ethylbenzene	ND	0.0250	1	07/23/24	07/23/24	
Toluene	ND	0.0250	1	07/23/24	07/23/24	
o-Xylene	ND	0.0250	1	07/23/24	07/23/24	
p,m-Xylene	ND	0.0500	1	07/23/24	07/23/24	
Total Xylenes	ND	0.0250	1	07/23/24	07/23/24	
Surrogate: 4-Bromochlorobenzene-PID		*93.1 %*	*70-130*	*07/23/24*	*07/23/24*	
Nonhalogenated Organics by EPA 8015D - GRO	mg/kg	mg/kg	Analyst: CG			Batch: 2430045
Gasoline Range Organics (C6-C10)	ND	20.0	1	07/23/24	07/23/24	
Surrogate: 1-Chloro-4-fluorobenzene-FID		*95.8 %*	*70-130*	*07/23/24*	*07/23/24*	
Nonhalogenated Organics by EPA 8015D - DRO/ORO	mg/kg	mg/kg	Analyst: NV			Batch: 2430040
Diesel Range Organics (C10-C28)	ND	25.0	1	07/23/24	07/24/24	
Oil Range Organics (C28-C36)	ND	50.0	1	07/23/24	07/24/24	
Surrogate: n-Nonane		*84.0 %*	*50-200*	*07/23/24*	*07/24/24*	
Anions by EPA 300.0/9056A	mg/kg	mg/kg	Analyst: JM			Batch: 2430048
Chloride	**34.0**	20.0	1	07/23/24	07/23/24	

QC Summary Data

Vertex Resource Services Inc.	Project Name:	Jackson Unit #003	**Reported:**
3101 Boyd Drive	Project Number:	24015-0001	
Carlsbad NM, 88220	Project Manager:	Chance Dixon	7/29/2024 5:41:40AM

Volatile Organic Compounds by EPA 8260B

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 (2430047-BLK1)									Prepared: 07/23/24 Analyzed: 07/23/24
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	*0.480*		*0.500*		*96.0*	*70-130*			
Surrogate: 1,2-Dichloroethane-d4	*0.478*		*0.500*		*95.5*	*70-130*			
Surrogate: Toluene-d8	*0.530*		*0.500*		*106*	*70-130*			
LCS (2430047-BS1)									Prepared: 07/23/24 Analyzed: 07/23/24
Benzene	2.17	0.0250	2.50		86.7	70-130			
Ethylbenzene	2.34	0.0250	2.50		93.7	70-130			
Toluene	2.33	0.0250	2.50		93.2	70-130			
o-Xylene	2.26	0.0250	2.50		90.4	70-130			
p,m-Xylene	4.57	0.0500	5.00		91.4	70-130			
Total Xylenes	6.83	0.0250	7.50		91.1	70-130			
Surrogate: Bromofluorobenzene	*0.487*		*0.500*		*97.4*	*70-130*			
Surrogate: 1,2-Dichloroethane-d4	*0.498*		*0.500*		*99.5*	*70-130*			
Surrogate: Toluene-d8	*0.529*		*0.500*		*106*	*70-130*			
Matrix Spike (2430047-MS1)				**Source: E407173-06**					Prepared: 07/23/24 Analyzed: 07/23/24
Benzene	2.16	0.0250	2.50	ND	86.5	48-131			
Ethylbenzene	2.32	0.0250	2.50	ND	92.8	45-135			
Toluene	2.29	0.0250	2.50	ND	91.5	48-130			
o-Xylene	2.22	0.0250	2.50	ND	88.9	43-135			
p,m-Xylene	4.49	0.0500	5.00	ND	89.7	43-135			
Total Xylenes	6.71	0.0250	7.50	ND	89.5	43-135			
Surrogate: Bromofluorobenzene	*0.480*		*0.500*		*96.0*	*70-130*			
Surrogate: 1,2-Dichloroethane-d4	*0.506*		*0.500*		*101*	*70-130*			
Surrogate: Toluene-d8	*0.518*		*0.500*		*104*	*70-130*			
Matrix Spike Dup (2430047-MSD1)				**Source: E407173-06**					Prepared: 07/23/24 Analyzed: 07/23/24
Benzene	2.20	0.0250	2.50	ND	87.9	48-131	1.58	23	
Ethylbenzene	2.37	0.0250	2.50	ND	94.9	45-135	2.28	27	
Toluene	2.35	0.0250	2.50	ND	94.1	48-130	2.89	24	
o-Xylene	2.28	0.0250	2.50	ND	91.3	43-135	2.62	27	
p,m-Xylene	4.57	0.0500	5.00	ND	91.4	43-135	1.79	27	
Total Xylenes	6.85	0.0250	7.50	ND	91.3	43-135	2.06	27	
Surrogate: Bromofluorobenzene	*0.494*		*0.500*		*98.8*	*70-130*			
Surrogate: 1,2-Dichloroethane-d4	*0.510*		*0.500*		*102*	*70-130*			
Surrogate: Toluene-d8	*0.525*		*0.500*		*105*	*70-130*			

QC Summary Data

Vertex Resource Services Inc.	Project Name:	Jackson Unit #003	**Reported:**
3101 Boyd Drive	Project Number:	24015-0001	
Carlsbad NM, 88220	Project Manager:	Chance Dixon	7/29/2024 5:41:40AM

Volatile Organics by EPA 8021B

Analyst: CG

Analyte	Result	Reporting Limit	Spike Level	Source Result	Rec	Rec Limits	RPD	RPD Limit	Notes
	mg/kg	mg/kg	mg/kg	mg/kg	%	%	%	%	
Blank (2430045-BLK1)									Prepared: 07/23/24 Analyzed: 07/23/24
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	*7.14*		*8.00*		*89.2*	*70-130*			
LCS (2430045-BS1)									Prepared: 07/23/24 Analyzed: 07/23/24
Benzene	4.91	0.0250	5.00		98.2	70-130			
Ethylbenzene	4.73	0.0250	5.00		94.5	70-130			
Toluene	4.83	0.0250	5.00		96.7	70-130			
o-Xylene	4.70	0.0250	5.00		94.1	70-130			
p,m-Xylene	9.61	0.0500	10.0		96.1	70-130			
Total Xylenes	14.3	0.0250	15.0		95.4	70-130			
Surrogate: 4-Bromochlorobenzene-PID	*7.30*		*8.00*		*91.2*	*70-130*			
Matrix Spike (2430045-MS1)				**Source: E407173-23**					Prepared: 07/23/24 Analyzed: 07/23/24
Benzene	4.96	0.0250	5.00	ND	99.2	54-133			
Ethylbenzene	4.78	0.0250	5.00	ND	95.5	61-133			
Toluene	4.88	0.0250	5.00	ND	97.6	61-130			
o-Xylene	4.76	0.0250	5.00	ND	95.2	63-131			
p,m-Xylene	9.71	0.0500	10.0	ND	97.1	63-131			
Total Xylenes	14.5	0.0250	15.0	ND	96.5	63-131			
Surrogate: 4-Bromochlorobenzene-PID	*7.24*		*8.00*		*90.6*	*70-130*			
Matrix Spike Dup (2430045-MSD1)				**Source: E407173-23**					Prepared: 07/23/24 Analyzed: 07/23/24
Benzene	4.62	0.0250	5.00	ND	92.4	54-133	7.09	20	
Ethylbenzene	4.45	0.0250	5.00	ND	89.0	61-133	7.06	20	
Toluene	4.55	0.0250	5.00	ND	91.0	61-130	7.00	20	
o-Xylene	4.44	0.0250	5.00	ND	88.8	63-131	6.86	20	
p,m-Xylene	9.06	0.0500	10.0	ND	90.6	63-131	6.97	20	
Total Xylenes	13.5	0.0250	15.0	ND	90.0	63-131	6.94	20	
Surrogate: 4-Bromochlorobenzene-PID	*7.25*		*8.00*		*90.7*	*70-130*			

QC Summary Data

Vertex Resource Services Inc.	Project Name:	Jackson Unit #003	**Reported:**
3101 Boyd Drive	Project Number:	24015-0001	
Carlsbad NM, 88220	Project Manager:	Chance Dixon	7/29/2024 5:41:40AM

Nonhalogenated Organics by EPA 8015D - GRO

Analyst: CG

Analyte	Result	Reporting Limit	Spike Level	Source Result	Rec	Rec Limits	RPD	RPD Limit	Notes
	mg/kg	mg/kg	mg/kg	mg/kg	%	%	%	%	
Blank (2430045-BLK1)									Prepared: 07/23/24 Analyzed: 07/23/24
Gasoline Range Organics (C6-C10)	ND	20.0							
Surrogate: 1-Chloro-4-fluorobenzene-FID	*7.64*		*8.00*		*95.5*	*70-130*			
LCS (2430045-BS2)									Prepared: 07/23/24 Analyzed: 07/23/24
Gasoline Range Organics (C6-C10)	46.3	20.0	50.0		92.7	70-130			
Surrogate: 1-Chloro-4-fluorobenzene-FID	*7.79*		*8.00*		*97.3*	*70-130*			
Matrix Spike (2430045-MS2)				**Source: E407173-23**					Prepared: 07/23/24 Analyzed: 07/23/24
Gasoline Range Organics (C6-C10)	43.6	20.0	50.0	ND	87.1	70-130			
Surrogate: 1-Chloro-4-fluorobenzene-FID	*7.80*		*8.00*		*97.5*	*70-130*			
Matrix Spike Dup (2430045-MSD2)				**Source: E407173-23**					Prepared: 07/23/24 Analyzed: 07/23/24
Gasoline Range Organics (C6-C10)	44.3	20.0	50.0	ND	88.7	70-130	1.71	20	
Surrogate: 1-Chloro-4-fluorobenzene-FID	*7.83*		*8.00*		*97.9*	*70-130*			

QC Summary Data

Vertex Resource Services Inc.	Project Name:	Jackson Unit #003	**Reported:**
3101 Boyd Drive	Project Number:	24015-0001	
Carlsbad NM, 88220	Project Manager:	Chance Dixon	7/29/2024 5:41:40AM

Nonhalogenated Organics by EPA 8015D - GRO

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 (2430047-BLK1)									Prepared: 07/23/24 Analyzed: 07/23/24
Gasoline Range Organics (C6-C10)	ND	20.0							
Surrogate: Bromofluorobenzene	*0.480*		*0.500*		*96.0*	*70-130*			
Surrogate: 1,2-Dichloroethane-d4	*0.478*		*0.500*		*95.5*	*70-130*			
Surrogate: Toluene-d8	*0.530*		*0.500*		*106*	*70-130*			
LCS (2430047-BS2)									Prepared: 07/23/24 Analyzed: 07/23/24
Gasoline Range Organics (C6-C10)	52.6	20.0	50.0		105	70-130			
Surrogate: Bromofluorobenzene	*0.501*		*0.500*		*100*	*70-130*			
Surrogate: 1,2-Dichloroethane-d4	*0.494*		*0.500*		*98.8*	*70-130*			
Surrogate: Toluene-d8	*0.536*		*0.500*		*107*	*70-130*			
Matrix Spike (2430047-MS2)				**Source: E407173-06**					Prepared: 07/23/24 Analyzed: 07/23/24
Gasoline Range Organics (C6-C10)	54.6	20.0	50.0	ND	109	70-130			
Surrogate: Bromofluorobenzene	*0.496*		*0.500*		*99.2*	*70-130*			
Surrogate: 1,2-Dichloroethane-d4	*0.489*		*0.500*		*97.7*	*70-130*			
Surrogate: Toluene-d8	*0.524*		*0.500*		*105*	*70-130*			
Matrix Spike Dup (2430047-MSD2)				**Source: E407173-06**					Prepared: 07/23/24 Analyzed: 07/23/24
Gasoline Range Organics (C6-C10)	54.2	20.0	50.0	ND	108	70-130	0.876	20	
Surrogate: Bromofluorobenzene	*0.500*		*0.500*		*99.9*	*70-130*			
Surrogate: 1,2-Dichloroethane-d4	*0.498*		*0.500*		*99.6*	*70-130*			
Surrogate: Toluene-d8	*0.536*		*0.500*		*107*	*70-130*			

QC Summary Data

Vertex Resource Services Inc.	Project Name:	Jackson Unit #003	**Reported:**
3101 Boyd Drive	Project Number:	24015-0001	
Carlsbad NM, 88220	Project Manager:	Chance Dixon	7/29/2024 5:41:40AM

Nonhalogenated Organics by EPA 8015D - DRO/ORO

Analyst: NV

Analyte	Result	Reporting Limit	Spike Level	Source Result	Rec	Rec Limits	RPD	RPD Limit	Notes
	mg/kg	mg/kg	mg/kg	mg/kg	%	%	%	%	
Blank (2430040-BLK1)									Prepared: 07/23/24 Analyzed: 07/23/24
Diesel Range Organics (C10-C28)	ND	25.0							
Oil Range Organics (C28-C36)	ND	50.0							
Surrogate: n-Nonane	*41.7*		*50.0*		*83.3*	*50-200*			
LCS (2430040-BS1)									Prepared: 07/23/24 Analyzed: 07/23/24
Diesel Range Organics (C10-C28)	210	25.0	250		83.9	38-132			
Surrogate: n-Nonane	*45.0*		*50.0*		*90.0*	*50-200*			
Matrix Spike (2430040-MS1)				**Source: E407170-04**					Prepared: 07/23/24 Analyzed: 07/23/24
Diesel Range Organics (C10-C28)	219	25.0	250	ND	87.7	38-132			
Surrogate: n-Nonane	*44.5*		*50.0*		*89.0*	*50-200*			
Matrix Spike Dup (2430040-MSD1)				**Source: E407170-04**					Prepared: 07/23/24 Analyzed: 07/23/24
Diesel Range Organics (C10-C28)	215	25.0	250	ND	85.9	38-132	2.08	20	
Surrogate: n-Nonane	*44.5*		*50.0*		*89.0*	*50-200*			

QC Summary Data

Vertex Resource Services Inc.	Project Name:	Jackson Unit #003	**Reported:**
3101 Boyd Drive	Project Number:	24015-0001	
Carlsbad NM, 88220	Project Manager:	Chance Dixon	7/29/2024 5:41:40AM

Nonhalogenated Organics by EPA 8015D - DRO/ORO

Analyst: KM

Analyte	Result	Reporting Limit	Spike Level	Source Result	Rec	Rec Limits	RPD	RPD Limit	Notes
	mg/kg	mg/kg	mg/kg	mg/kg	%	%	%	%	
Blank (2430041-BLK1)									Prepared: 07/23/24 Analyzed: 07/23/24
Diesel Range Organics (C10-C28)	ND	25.0							
Oil Range Organics (C28-C36)	ND	50.0							
Surrogate: n-Nonane	*58.4*		*50.0*		*117*	*50-200*			
LCS (2430041-BS1)									Prepared: 07/23/24 Analyzed: 07/23/24
Diesel Range Organics (C10-C28)	226	25.0	250		90.4	38-132			
Surrogate: n-Nonane	*59.1*		*50.0*		*118*	*50-200*			
Matrix Spike (2430041-MS1)				**Source: E407173-08**					Prepared: 07/23/24 Analyzed: 07/23/24
Diesel Range Organics (C10-C28)	253	25.0	250	ND	101	38-132			
Surrogate: n-Nonane	*59.0*		*50.0*		*118*	*50-200*			
Matrix Spike Dup (2430041-MSD1)				**Source: E407173-08**					Prepared: 07/23/24 Analyzed: 07/23/24
Diesel Range Organics (C10-C28)	274	25.0	250	ND	110	38-132	8.25	20	
Surrogate: n-Nonane	*61.3*		*50.0*		*123*	*50-200*			

QC Summary Data

Vertex Resource Services Inc.	Project Name:	Jackson Unit #003	**Reported:**
3101 Boyd Drive	Project Number:	24015-0001	
Carlsbad NM, 88220	Project Manager:	Chance Dixon	7/29/2024 5:41:40AM

Anions by EPA 300.0/9056A

Analyst: JM

Analyte	Result	Reporting Limit	Spike Level	Source Result	Rec	Rec Limits	RPD	RPD Limit	Notes
	mg/kg	mg/kg	mg/kg	mg/kg	%	%	%	%	
Blank (2430048-BLK1)									Prepared: 07/23/24 Analyzed: 07/23/24
Chloride	ND	20.0							
LCS (2430048-BS1)									Prepared: 07/23/24 Analyzed: 07/23/24
Chloride	248	20.0	250		99.4	90-110			
Matrix Spike (2430048-MS1)				**Source: E407170-04**					Prepared: 07/23/24 Analyzed: 07/23/24
Chloride	309	20.0	250	53.3	102	80-120			
Matrix Spike Dup (2430048-MSD1)				**Source: E407170-04**					Prepared: 07/23/24 Analyzed: 07/23/24
Chloride	310	20.0	250	53.3	103	80-120	0.280	20	

QC Summary Data

Vertex Resource Services Inc.	Project Name:	Jackson Unit #003	**Reported:**
3101 Boyd Drive	Project Number:	24015-0001	
Carlsbad NM, 88220	Project Manager:	Chance Dixon	7/29/2024 5:41:40AM

Anions by EPA 300.0/9056A

Analyst: WF

Analyte	Result	Reporting Limit	Spike Level	Source Result	Rec	Rec Limits	RPD	RPD Limit	Notes
	mg/kg	mg/kg	mg/kg	mg/kg	%	%	%	%	
Blank (2430049-BLK1)									Prepared: 07/23/24 Analyzed: 07/23/24
Chloride	ND	20.0							
LCS (2430049-BS1)									Prepared: 07/23/24 Analyzed: 07/23/24
Chloride	248	20.0	250		99.4	90-110			
Matrix Spike (2430049-MS1)				**Source: E407173-02**					Prepared: 07/23/24 Analyzed: 07/23/24
Chloride	269	20.0	250	ND	108	80-120			
Matrix Spike Dup (2430049-MSD1)				**Source: E407173-02**					Prepared: 07/23/24 Analyzed: 07/23/24
Chloride	273	20.0	250	ND	109	80-120	1.30	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:	Jackson Unit #003	
3101 Boyd Drive	Project Number:	24015-0001	**Reported:**
Carlsbad NM, 88220	Project Manager:	Chance Dixon	07/29/24 05:41

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.

Released to Imaging: 9/3/2024 11:39:55 AM
Received by OCD: 9/3/2024 11:00:09 AM

Chain of Custody

Client Information	Invoice Information	Lab Use Only	TAT	State
Client: Vertex (Bill direct Tap Rock)	Company: Tap Rock (Bill Ramsey)	Lab WO# E407173	1D 2D 3D Std ✓	NM ✓ CO UT TX
Project Name: Jackson Unit #003	Address:	Job Number 24015-0001		
Project Manager: Chance Dixon	City, State, Zip:			
Address: project #: 24E-03316	Phone:			
City, State, Zip:	Email:			
Phone:	Miscellaneous: Direct bill to Tap Rock ATTN: Bill Ramsey			
Email: CDixon@VertexResource.com				

Sample Information

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	Remarks
9:45	7/19/24	Soil	1	BH24-09 0-'		1	✓	✓	✓		✓				
9:50				BH24-09 2-'		2									
9:55				BH24-09 4-'		3									
10:00				BH24-10 0-'		4									
10:05				BH24-10 2-'		5									
10:10				BH24-11 0-'		6									
10:15				BH24-11 2-'		7									
10:20				BH24-11 4-'		8									
1025				BH24-12 0-'		9									
10:30				BH24-12 2-'		10	✓	✓	✓		✓				

Analysis and Method

EPA Program: SDWA | CWA | RCRA

Compliance Y or N

PWSID #

Additional Instructions:

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: Stephanie McCarty

Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time
Stephanie McCarty	7/21/24		Michelle Gonzales	7-22-24	1030
Michelle Gonzales	7-22-24	1620	A.M.	7.22.24	1730
A.M.	7-22-24	2345		7-23-24	0830
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.

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 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

Released to Imaging: 9/3/2024 11:39:55 AM
Received by OCD: 9/3/2024 11:00:09 AM

Project Information | Chain of Custody | Page 2 of 3

Client:	Vertex (Bill direct TopRock)
Project:	Jackson Unit #003
Project Manager:	Clance Dixon
Address:	Project#: 24E-03316
City, State, Zip	
Phone:	
Email:	CDixon@VertexResources.com
Report due by:	

Bill To

Attention:	TopRock (Bill Ramsey)
Address:	
City, State, Zip	
Phone:	
Email:	Direct bill to TopRock ATTN: Bill Ramsey

Lab Use Only

Lab WO#	Job Number
E407173	24015-0001

TAT: 1D | 2D | 3D | Standard ✓

EPA Program: CWA | SDWA | RCRA

State: NM ✓ | CO | UT | AZ | TX

Time Sampled	Date Sampled	Matrix	No. of Containers	Sample ID	Lab Number	TPH GRO/DRO/ORO by 8015	BTEX by 8021	VOC by 8260	Metals 6010	Chloride 300.0	BGDOC NM	BGDOC TX	Remarks
10:35	7/19/24	Soil	1	BH24-13 0'	11	✓	✓			✓			
10:40				BH24-13 2'	12								
10:45				BH24-13 4'	13								
11:00				BH24-14 0'	14								
11:05				BH24-14 2'	15								
11:15				BH24-14 4'	16								
11:20				BH24-15 0'	17								
11:25				BH24-15 2'	18								
11:30				BH24-15 4'	19								
11:35	↓	↓	↓	BH24-16 0'	20	↓	↓			↓			

Additional Instructions:

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: Stephanie McCarty

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 6 °C on subsequent days.

Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time
	7/21/24		Michelle Gonzales	72224	1030
Michelle Gonzales	7-22-24	1620		7.22.24	1730
	7.22.24	2345		7-23-24	0830

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

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.

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Released to Imaging: 9/3/2024 11:39:55 AM
Received by OCD: 9/3/2024 11:00:09 AM

Chain of Custody

Client Information	Invoice Information	Lab Use Only	TAT	State
Client: Vertex (Direct bill to TgRock)	Company: TgRock (Bill Ramsey)	Lab WO# E407173	1D 2D 3D Std ✓	NM ✓ CO UT TX
Project Name: Jackson Unit #003	Address:	Job Number 24015-0001		
Project Manager: Chance Dixon	City, State, Zip:			
Address: Project #: 24E-03316	Phone:			
City, State, Zip:	Email:			
Phone:	Miscellaneous: Direct bill to TgRock ATTN: Bill Ramsey			
Email: CDixon@VertexResource.com				

Sample Information

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				Remarks
11:40	7-19-24	Soil	1	BH24-16 2'		21	✓	✓	✓		✓							
11:45				BH24-16 4'		22												
12:00				BH24-17 0'		23												
12:05				BH24-17 2'		24												
12:10	↓	↓	↓	BH24-17 4'		25	↓	↓	↓		↓							

Analysis and Method

EPA Program: SDWA | CWA | RCRA

Compliance Y or N

PWSID #

Additional Instructions:

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: Stephanie McCarty

Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time
	7/21/24		Michelle Gonzales	7-22-24	1030
	7-22-24	1620		7.22.24	1730
Michelle Gonzales	[redacted]	[redacted]			
	7.22.24	2345		7/23/24	0830

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 9

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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Envirotech Analytical Laboratory

Printed: 7/23/2024 3:02:32PM

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:	07/23/24 08:30	Work Order ID:	E407173
Phone:	(575) 748-0176	Date Logged In:	07/22/24 17:07	Logged In By:	Noe Soto
Email:	cdixon@vertex.ca	Due Date:	07/29/24 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	Carrier: Courrier
4. Was the COC complete, i.e., signatures, dates/times, requested analyses?	Yes	
5. Were all samples received within holding time? Note: Analysis, such as pH which should be conducted in the field, i.e, 15 minute hold time, are not included in this disucssion.	Yes	

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

5796 U.S. Hwy 64
Farmington, NM 87401

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

NELAP ACCREDITED TNI LABORATORY

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Practical Solutions for a Better Tomorrow

Analytical Report

Vertex Resource Services Inc.

Project Name:	Jackson Unit #003
Work Order:	E408081
Job Number:	24015-0001
Received:	8/9/2024

Revision: 1

Report Reviewed By:

Walter Hinchman
Laboratory Director
8/12/24

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: 8/12/24

Chance Dixon
3101 Boyd Drive
Carlsbad, NM 88220

Project Name: Jackson Unit #003
Workorder: E408081
Date Received: 8/9/2024 6:30:00AM

Chance Dixon,

Thank you for choosing Envirotech, Inc. as your analytical testing laboratory for the sample(s) received on, 8/9/2024 6:30:00AM, under the Project Name: Jackson Unit #003.

The analytical test results summarized in this report with the Project Name: Jackson Unit #003 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 reguarding 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

Raina Schwanz
Laboratory Administrator
Office: 505-632-1881
rainaschwanz@envirotech-inc.com

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Lynn Jarboe
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ljarboe@envirotech-inc.com

Michelle Gonzales
Client Representative
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Cell: 505-947-8222
mgonzales@envirotech-inc.com

Envirotech Web Address: www.envirotech-inc.com

Table of Contents

Sample Summary

Vertex Resource Services Inc.	Project Name:	Jackson Unit #003	**Reported:**
3101 Boyd Drive	Project Number:	24015-0001	
Carlsbad NM, 88220	Project Manager:	Chance Dixon	08/12/24 14:23

Client Sample ID	Lab Sample ID	Matrix	Sampled	Received	Container
BH24-09 7'	E408081-01A	Soil	08/07/24	08/09/24	Glass Jar, 2 oz.

Sample Data

Vertex Resource Services Inc.	Project Name:	Jackson Unit #003	
3101 Boyd Drive	Project Number:	24015-0001	**Reported:**
Carlsbad NM, 88220	Project Manager:	Chance Dixon	8/12/2024 2:23:14PM

BH24-09 7'

E408081-01

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organics by EPA 8021B	mg/kg	mg/kg	Analyst: BA			Batch: 2432116
Benzene	ND	0.0250	1	08/09/24	08/09/24	
Ethylbenzene	**1.17**	0.0250	1	08/09/24	08/09/24	
Toluene	**1.37**	0.0250	1	08/09/24	08/09/24	
o-Xylene	**1.46**	0.0250	1	08/09/24	08/09/24	
p,m-Xylene	**12.4**	0.0500	1	08/09/24	08/09/24	
Total Xylenes	**13.9**	0.0250	1	08/09/24	08/09/24	
Surrogate: 4-Bromochlorobenzene-PID		*115 %*	*70-130*	*08/09/24*	*08/09/24*	
Nonhalogenated Organics by EPA 8015D - GRO	mg/kg	mg/kg	Analyst: BA			Batch: 2432116
Gasoline Range Organics (C6-C10)	**434**	20.0	1	08/09/24	08/09/24	
Surrogate: 1-Chloro-4-fluorobenzene-FID		*119 %*	*70-130*	*08/09/24*	*08/09/24*	
Nonhalogenated Organics by EPA 8015D - DRO/ORO	mg/kg	mg/kg	Analyst: NV			Batch: 2432114
Diesel Range Organics (C10-C28)	**1220**	25.0	1	08/09/24	08/09/24	
Oil Range Organics (C28-C36)	**71.8**	50.0	1	08/09/24	08/09/24	
Surrogate: n-Nonane		*126 %*	*50-200*	*08/09/24*	*08/09/24*	
Anions by EPA 300.0/9056A	mg/kg	mg/kg	Analyst: DT			Batch: 2432125
Chloride	**29.3**	20.0	1	08/09/24	08/09/24	

QC Summary Data

Vertex Resource Services Inc.	Project Name:	Jackson Unit #003	**Reported:**
3101 Boyd Drive	Project Number:	24015-0001	
Carlsbad NM, 88220	Project Manager:	Chance Dixon	8/12/2024 2:23:14PM

Volatile Organics by EPA 8021B

Analyst: BA

Analyte	Result	Reporting Limit	Spike Level	Source Result	Rec	Rec Limits	RPD	RPD Limit	Notes
	mg/kg	mg/kg	mg/kg	mg/kg	%	%	%	%	
Blank (2432116-BLK1)									Prepared: 08/09/24 Analyzed: 08/09/24
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 (2432116-BS1)									Prepared: 08/09/24 Analyzed: 08/09/24
Benzene	5.34	0.0250	5.00		107	70-130			
Ethylbenzene	5.11	0.0250	5.00		102	70-130			
Toluene	5.34	0.0250	5.00		107	70-130			
o-Xylene	5.22	0.0250	5.00		104	70-130			
p,m-Xylene	10.5	0.0500	10.0		105	70-130			
Total Xylenes	15.7	0.0250	15.0		105	70-130			
Surrogate: 4-Bromochlorobenzene-PID	*7.31*		*8.00*		*91.4*	*70-130*			
Matrix Spike (2432116-MS1)				**Source: E408081-01**					Prepared: 08/09/24 Analyzed: 08/09/24
Benzene	4.82	0.0250	5.00	ND	96.4	54-133			
Ethylbenzene	5.94	0.0250	5.00	1.17	95.3	61-133			
Toluene	5.95	0.0250	5.00	1.37	91.7	61-130			
o-Xylene	7.04	0.0250	5.00	1.46	112	63-131			
p,m-Xylene	18.9	0.0500	10.0	12.4	64.3	63-131			
Total Xylenes	25.9	0.0250	15.0	13.9	80.1	63-131			
Surrogate: 4-Bromochlorobenzene-PID	*8.91*		*8.00*		*111*	*70-130*			
Matrix Spike Dup (2432116-MSD1)				**Source: E408081-01**					Prepared: 08/09/24 Analyzed: 08/09/24
Benzene	4.96	0.0250	5.00	ND	99.2	54-133	2.89	20	
Ethylbenzene	6.08	0.0250	5.00	1.17	98.1	61-133	2.35	20	
Toluene	6.09	0.0250	5.00	1.37	94.4	61-130	2.25	20	
o-Xylene	7.17	0.0250	5.00	1.46	114	63-131	1.81	20	
p,m-Xylene	19.2	0.0500	10.0	12.4	67.3	63-131	1.59	20	
Total Xylenes	26.3	0.0250	15.0	13.9	83.0	63-131	1.65	20	
Surrogate: 4-Bromochlorobenzene-PID	*8.87*		*8.00*		*111*	*70-130*			

QC Summary Data

Vertex Resource Services Inc.	Project Name:	Jackson Unit #003	**Reported:**
3101 Boyd Drive	Project Number:	24015-0001	
Carlsbad NM, 88220	Project Manager:	Chance Dixon	8/12/2024 2:23:14PM

Nonhalogenated Organics by EPA 8015D - GRO

Analyst: BA

Analyte	Result	Reporting Limit	Spike Level	Source Result	Rec	Rec Limits	RPD	RPD Limit	Notes
	mg/kg	mg/kg	mg/kg	mg/kg	%	%	%	%	
Blank (2432116-BLK1)									Prepared: 08/09/24 Analyzed: 08/09/24
Gasoline Range Organics (C6-C10)	ND	20.0							
Surrogate: 1-Chloro-4-fluorobenzene-FID	*8.35*		*8.00*		*104*	*70-130*			
LCS (2432116-BS2)									Prepared: 08/09/24 Analyzed: 08/09/24
Gasoline Range Organics (C6-C10)	47.7	20.0	50.0		95.4	70-130			
Surrogate: 1-Chloro-4-fluorobenzene-FID	*8.59*		*8.00*		*107*	*70-130*			
Matrix Spike (2432116-MS2)				**Source: E408081-01**					Prepared: 08/09/24 Analyzed: 08/09/24
Gasoline Range Organics (C6-C10)	356	20.0	50.0	434	NR	70-130			M4
Surrogate: 1-Chloro-4-fluorobenzene-FID	*9.46*		*8.00*		*118*	*70-130*			
Matrix Spike Dup (2432116-MSD2)				**Source: E408081-01**					Prepared: 08/09/24 Analyzed: 08/09/24
Gasoline Range Organics (C6-C10)	398	20.0	50.0	434	NR	70-130	11.1	20	M4
Surrogate: 1-Chloro-4-fluorobenzene-FID	*9.51*		*8.00*		*119*	*70-130*			

QC Summary Data

Vertex Resource Services Inc.	Project Name:	Jackson Unit #003	**Reported:**
3101 Boyd Drive	Project Number:	24015-0001	
Carlsbad NM, 88220	Project Manager:	Chance Dixon	8/12/2024 2:23:14PM

Nonhalogenated Organics by EPA 8015D - DRO/ORO

Analyst: NV

Analyte	Result	Reporting Limit	Spike Level	Source Result	Rec	Rec Limits	RPD	RPD Limit	Notes
	mg/kg	mg/kg	mg/kg	mg/kg	%	%	%	%	
Blank (2432114-BLK1)									Prepared: 08/09/24 Analyzed: 08/09/24
Diesel Range Organics (C10-C28)	ND	25.0							
Oil Range Organics (C28-C36)	ND	50.0							
Surrogate: n-Nonane	*53.4*		*50.0*		*107*	*50-200*			
LCS (2432114-BS1)									Prepared: 08/09/24 Analyzed: 08/09/24
Diesel Range Organics (C10-C28)	248	25.0	250		99.2	38-132			
Surrogate: n-Nonane	*53.5*		*50.0*		*107*	*50-200*			
Matrix Spike (2432114-MS1)				**Source: E408086-07**					Prepared: 08/09/24 Analyzed: 08/09/24
Diesel Range Organics (C10-C28)	242	25.0	250	ND	97.0	38-132			
Surrogate: n-Nonane	*54.3*		*50.0*		*109*	*50-200*			
Matrix Spike Dup (2432114-MSD1)				**Source: E408086-07**					Prepared: 08/09/24 Analyzed: 08/09/24
Diesel Range Organics (C10-C28)	255	25.0	250	ND	102	38-132	5.16	20	
Surrogate: n-Nonane	*53.3*		*50.0*		*107*	*50-200*			

QC Summary Data

Vertex Resource Services Inc.	Project Name:	Jackson Unit #003	**Reported:**
3101 Boyd Drive	Project Number:	24015-0001	
Carlsbad NM, 88220	Project Manager:	Chance Dixon	8/12/2024 2:23:14PM

Anions by EPA 300.0/9056A

Analyst: DT

Analyte	Result	Reporting Limit	Spike Level	Source Result	Rec	Rec Limits	RPD	RPD Limit	Notes
	mg/kg	mg/kg	mg/kg	mg/kg	%	%	%	%	
Blank (2432125-BLK1)									Prepared: 08/09/24 Analyzed: 08/09/24
Chloride	ND	20.0							
LCS (2432125-BS1)									Prepared: 08/09/24 Analyzed: 08/09/24
Chloride	253	20.0	250		101	90-110			
Matrix Spike (2432125-MS1)				**Source: E408081-01**					Prepared: 08/09/24 Analyzed: 08/09/24
Chloride	285	20.0	250	29.3	102	80-120			
Matrix Spike Dup (2432125-MSD1)				**Source: E408081-01**					Prepared: 08/09/24 Analyzed: 08/09/24
Chloride	285	20.0	250	29.3	102	80-120	0.0657	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:	Jackson Unit #003	
3101 Boyd Drive	Project Number:	24015-0001	**Reported:**
Carlsbad NM, 88220	Project Manager:	Chance Dixon	08/12/24 14:23

M4	Matrix spike recovery value is suspect since the analyte concentration in the sample is disproportionate to the spike level. The associated LCS spike recovery was acceptable.
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.

Released to Imaging: 9/3/2024 11:39:55 AM
Received by OCD: 9/3/2024 11:00:09 AM

Chain of Custody

Client Information	Invoice Information	Lab Use Only	TAT	State
Client: Vertex	Company: Tap Rock (Bill Ramsey)	Lab WO# E408081	Job Number 24015-0001	1D: X; 2D; 3D; Std	NM: X; CO; UT; TX
Project Name: Jackson Unit #003	Address:			
Project Manager: Chance Dixon	City, State, Zip:			
Address: 3101 Boyd	Phone:			
City, State, Zip: Carlsbad, NM, 88220	Email:			
Phone: 575-725-5001	Miscellaneous: Direct Bill to Tap Rock ATTN: Bill Ramsey			
Email:				

Analysis and Method

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/ORO by 8015	GRO/DRO by 8015	BTEX by 8021	VOC by 8260	Chloride 300.0	BGDOC - NM	TCEQ 1005 - TX	RCRA 8 Metals	Remarks
11:30	8.7.24	Soil	1	BH24-09 7'		1	X	X	X		X				

Additional Instructions: Direct bill to Tap Rock ATTN: Bill Ramsey. Please email cdixon@vertexresource.com permian@vertexresource.com

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: John Rewis

Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time
			Michelle Gonzales	8.8.24	1015
Michelle Gonzales	8-8-24	1645		8.8.24	1745
Andrew M.	8.8.24	2400		8-9-24	0630

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

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: 8/9/2024 8:07:42AM

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:	08/09/24 06:30	Work Order ID:	E408081
Phone:	(575) 748-0176	Date Logged In:	08/09/24 06:35	Logged In By:	Noe Soto
Email:	cdixon@vertex.ca	Due Date:	08/09/24 17:00 (0 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	Carrier: Courier
4. Was the COC complete, i.e., signatures, dates/times, requested analyses?	Yes	
5. Were all samples received within holding time? Note: Analysis, such as pH which should be conducted in the field, i.e, 15 minute hold time, are not included in this disucssion.	Yes	

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

5796 U.S. Hwy 64
Farmington, NM 87401

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

envirotech

Practical Solutions for a Better Tomorrow

Analytical Report

Vertex Resource Services Inc.

Project Name:	Jackson Unit #003
Work Order:	E408143
Job Number:	24015-0001
Received:	8/16/2024

Revision: 1

Report Reviewed By:

Walter Hinchman
Laboratory Director
8/19/24

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: 8/19/24

Chance Dixon
3101 Boyd Drive
Carlsbad, NM 88220

Project Name: Jackson Unit #003
Workorder: E408143
Date Received: 8/16/2024 8:00:56AM

Chance Dixon,

Thank you for choosing Envirotech, Inc. as your analytical testing laboratory for the sample(s) received on, 8/16/2024 8:00:56AM, under the Project Name: Jackson Unit #003.

The analytical test results summarized in this report with the Project Name: Jackson Unit #003 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 reguarding 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

Raina Schwanz
Laboratory Administrator
Office: 505-632-1881
rainaschwanz@envirotech-inc.com

Field Offices:

Southern New Mexico Area

Lynn Jarboe
Laboratory Technical Representative
Office: 505-421-LABS(5227)
Cell: 505-320-4759
ljarboe@envirotech-inc.com

Michelle Gonzales
Client Representative
Office: 505-421-LABS(5227)
Cell: 505-947-8222
mgonzales@envirotech-inc.com

Envirotech Web Address: www.envirotech-inc.com

Table of Contents

Sample Summary

Vertex Resource Services Inc.	Project Name:	Jackson Unit #003	**Reported:**
3101 Boyd Drive	Project Number:	24015-0001	
Carlsbad NM, 88220	Project Manager:	Chance Dixon	08/19/24 15:07

Client Sample ID	Lab Sample ID	Matrix	Sampled	Received	Container
BH24-09 8.0'	E408143-01A	Soil	08/15/24	08/16/24	Glass Jar, 4 oz.

Sample Data

Vertex Resource Services Inc.	Project Name:	Jackson Unit #003	
3101 Boyd Drive	Project Number:	24015-0001	**Reported:**
Carlsbad NM, 88220	Project Manager:	Chance Dixon	8/19/2024 3:07:16PM

BH24-09 8.0'

E408143-01

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organics by EPA 8021B	mg/kg	mg/kg	Analyst: IY			Batch: 2433113
Benzene	ND	0.0250	1	08/16/24	08/16/24	
Ethylbenzene	**0.654**	0.0250	1	08/16/24	08/16/24	
Toluene	**0.488**	0.0250	1	08/16/24	08/16/24	
o-Xylene	**1.09**	0.0250	1	08/16/24	08/16/24	
p,m-Xylene	**4.64**	0.0500	1	08/16/24	08/16/24	
Total Xylenes	**5.73**	0.0250	1	08/16/24	08/16/24	
Surrogate: 4-Bromochlorobenzene-PID		*90.8 %*	*70-130*	*08/16/24*	*08/16/24*	
Nonhalogenated Organics by EPA 8015D - GRO	mg/kg	mg/kg	Analyst: IY			Batch: 2433113
Gasoline Range Organics (C6-C10)	**216**	20.0	1	08/16/24	08/16/24	
Surrogate: 1-Chloro-4-fluorobenzene-FID		*161 %*	*70-130*	*08/16/24*	*08/16/24*	*S3*
Nonhalogenated Organics by EPA 8015D - DRO/ORO	mg/kg	mg/kg	Analyst: NV			Batch: 2433105
Diesel Range Organics (C10-C28)	**730**	25.0	1	08/15/24	08/16/24	
Oil Range Organics (C28-C36)	**58.2**	50.0	1	08/15/24	08/16/24	
Surrogate: n-Nonane		*111 %*	*50-200*	*08/15/24*	*08/16/24*	
Anions by EPA 300.0/9056A	mg/kg	mg/kg	Analyst: DT			Batch: 2433112
Chloride	**55.2**	20.0	1	08/16/24	08/16/24	

QC Summary Data

Vertex Resource Services Inc.	Project Name:	Jackson Unit #003	**Reported:**
3101 Boyd Drive	Project Number:	24015-0001	
Carlsbad NM, 88220	Project Manager:	Chance Dixon	8/19/2024 3:07:16PM

Volatile Organics by EPA 8021B

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 (2433113-BLK1)									Prepared: 08/16/24 Analyzed: 08/16/24
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: 4-Bromochlorobenzene-PID	*7.16*		*8.00*		*89.4*	*70-130*			
LCS (2433113-BS1)									Prepared: 08/16/24 Analyzed: 08/16/24
Benzene	5.28	0.0250	5.00		106	70-130			
Ethylbenzene	5.10	0.0250	5.00		102	70-130			
Toluene	5.20	0.0250	5.00		104	70-130			
o-Xylene	5.07	0.0250	5.00		101	70-130			
p,m-Xylene	10.4	0.0500	10.0		104	70-130			
Total Xylenes	15.4	0.0250	15.0		103	70-130			
Surrogate: 4-Bromochlorobenzene-PID	*7.15*		*8.00*		*89.4*	*70-130*			
Matrix Spike (2433113-MS1)				**Source: E408144-07**					Prepared: 08/16/24 Analyzed: 08/16/24
Benzene	5.10	0.0250	5.00	ND	102	54-133			
Ethylbenzene	4.91	0.0250	5.00	ND	98.2	61-133			
Toluene	5.01	0.0250	5.00	ND	100	61-130			
o-Xylene	4.89	0.0250	5.00	ND	97.8	63-131			
p,m-Xylene	9.98	0.0500	10.0	ND	99.8	63-131			
Total Xylenes	14.9	0.0250	15.0	ND	99.1	63-131			
Surrogate: 4-Bromochlorobenzene-PID	*7.20*		*8.00*		*90.1*	*70-130*			
Matrix Spike Dup (2433113-MSD1)				**Source: E408144-07**					Prepared: 08/16/24 Analyzed: 08/16/24
Benzene	5.14	0.0250	5.00	ND	103	54-133	0.925	20	
Ethylbenzene	4.95	0.0250	5.00	ND	99.1	61-133	0.862	20	
Toluene	5.06	0.0250	5.00	ND	101	61-130	0.839	20	
o-Xylene	4.92	0.0250	5.00	ND	98.5	63-131	0.703	20	
p,m-Xylene	10.1	0.0500	10.0	ND	101	63-131	0.775	20	
Total Xylenes	15.0	0.0250	15.0	ND	99.9	63-131	0.752	20	
Surrogate: 4-Bromochlorobenzene-PID	*7.14*		*8.00*		*89.2*	*70-130*			

QC Summary Data

Vertex Resource Services Inc.	Project Name:	Jackson Unit #003	**Reported:**
3101 Boyd Drive	Project Number:	24015-0001	
Carlsbad NM, 88220	Project Manager:	Chance Dixon	8/19/2024 3:07:16PM

Nonhalogenated Organics by EPA 8015D - GRO

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 (2433113-BLK1)									Prepared: 08/16/24 Analyzed: 08/16/24
Gasoline Range Organics (C6-C10)	ND	20.0							
Surrogate: 1-Chloro-4-fluorobenzene-FID	*7.55*		*8.00*		*94.3*	*70-130*			
LCS (2433113-BS2)									Prepared: 08/16/24 Analyzed: 08/16/24
Gasoline Range Organics (C6-C10)	46.3	20.0	50.0		92.6	70-130			
Surrogate: 1-Chloro-4-fluorobenzene-FID	*7.68*		*8.00*		*96.0*	*70-130*			
Matrix Spike (2433113-MS2)				**Source: E408144-07**					Prepared: 08/16/24 Analyzed: 08/16/24
Gasoline Range Organics (C6-C10)	45.5	20.0	50.0	ND	91.0	70-130			
Surrogate: 1-Chloro-4-fluorobenzene-FID	*7.63*		*8.00*		*95.3*	*70-130*			
Matrix Spike Dup (2433113-MSD2)				**Source: E408144-07**					Prepared: 08/16/24 Analyzed: 08/16/24
Gasoline Range Organics (C6-C10)	45.6	20.0	50.0	ND	91.1	70-130	0.166	20	
Surrogate: 1-Chloro-4-fluorobenzene-FID	*7.66*		*8.00*		*95.7*	*70-130*			

QC Summary Data

Vertex Resource Services Inc.	Project Name:	Jackson Unit #003	**Reported:**
3101 Boyd Drive	Project Number:	24015-0001	
Carlsbad NM, 88220	Project Manager:	Chance Dixon	8/19/2024 3:07:16PM

Nonhalogenated Organics by EPA 8015D - DRO/ORO

Analyst: NV

Analyte	Result	Reporting Limit	Spike Level	Source Result	Rec	Rec Limits	RPD	RPD Limit	Notes
	mg/kg	mg/kg	mg/kg	mg/kg	%	%	%	%	
Blank (2433105-BLK1)									Prepared: 08/15/24 Analyzed: 08/16/24
Diesel Range Organics (C10-C28)	ND	25.0							
Oil Range Organics (C28-C36)	ND	50.0							
Surrogate: n-Nonane	*57.0*		*50.0*		*114*	*50-200*			
LCS (2433105-BS1)									Prepared: 08/15/24 Analyzed: 08/16/24
Diesel Range Organics (C10-C28)	237	25.0	250		94.6	38-132			
Surrogate: n-Nonane	*56.5*		*50.0*		*113*	*50-200*			
Matrix Spike (2433105-MS1)				**Source: E408144-06**					Prepared: 08/15/24 Analyzed: 08/16/24
Diesel Range Organics (C10-C28)	225	25.0	250	ND	90.1	38-132			
Surrogate: n-Nonane	*48.1*		*50.0*		*96.2*	*50-200*			
Matrix Spike Dup (2433105-MSD1)				**Source: E408144-06**					Prepared: 08/15/24 Analyzed: 08/16/24
Diesel Range Organics (C10-C28)	250	25.0	250	ND	100	38-132	10.4	20	
Surrogate: n-Nonane	*60.7*		*50.0*		*121*	*50-200*			

QC Summary Data

Vertex Resource Services Inc.	Project Name:	Jackson Unit #003	**Reported:**
3101 Boyd Drive	Project Number:	24015-0001	
Carlsbad NM, 88220	Project Manager:	Chance Dixon	8/19/2024 3:07:16PM

Anions by EPA 300.0/9056A

Analyst: DT

Analyte	Result	Reporting Limit	Spike Level	Source Result	Rec	Rec Limits	RPD	RPD Limit	Notes
	mg/kg	mg/kg	mg/kg	mg/kg	%	%	%	%	
Blank (2433112-BLK1)									Prepared: 08/16/24 Analyzed: 08/16/24
Chloride	ND	20.0							
LCS (2433112-BS1)									Prepared: 08/16/24 Analyzed: 08/16/24
Chloride	254	20.0	250		102	90-110			
Matrix Spike (2433112-MS1)				**Source: E408143-01**					Prepared: 08/16/24 Analyzed: 08/16/24
Chloride	311	20.0	250	55.2	102	80-120			
Matrix Spike Dup (2433112-MSD1)				**Source: E408143-01**					Prepared: 08/16/24 Analyzed: 08/16/24
Chloride	317	20.0	250	55.2	105	80-120	1.94	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:	Jackson Unit #003	
3101 Boyd Drive	Project Number:	24015-0001	**Reported:**
Carlsbad NM, 88220	Project Manager:	Chance Dixon	08/19/24 15:07

S3	Surrogate spike recovery was outside acceptance limits. LCS spike recovery was acceptable.
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.

Released to Imaging: 9/3/2024 11:39:55 AM
Received by OCD: 9/3/2024 11:00:09 AM

Chain of Custody

Client Information	Invoice Information	Lab Use Only	TAT	State
Client: Vertex	Company: Tap Rock (Bill Ramsey)	Lab WO# E408143	Job Number 24015-0001	1D: X; 2D; 3D; Std	NM: X; CO; UT; TX
Project Name: Jackson Unit #003	Address:			
Project Manager: Chance Dixon	City, State, Zip:			
Address: 3101 Boyd Dr.	Phone:			
City, State, Zip: Carlsbad, NM, 88220	Email:			
Phone: 575-725-5001	Miscellaneous: Direct Bill to Tap Rock ATTN: Bill Ramsey			
Email:				

Sample Information

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				Remarks
0855	8.15.24	Soil	1	BH24-09 8.0'		1	X	X	X		X							

Analysis and Method

EPA Program: SDWA | CWA | RCRA

Compliance: Y or N

PWSID #

Additional Instructions: Direct bill to Tap Rock ATTN: Bill Ramsey. Please email cdixon@vertexresource.com cc: aludvik@vertexresource.com Permian@vertexresource.com

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: Andrew Ludvik

Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time
	8.15.24	2:40	Michelle Gray	8-15-24	1440
Michelle Gray	8-15-24	2240		8-16-24	0800
Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time
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.

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

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: 8/16/2024 8:40:07AM

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:	08/16/24 08:00	Work Order ID:	E408143
Phone:	(575) 748-0176	Date Logged In:	08/15/24 15:10	Logged In By:	Noe Soto
Email:	cdixon@vertex.ca	Due Date:	08/16/24 17:00 (0 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	Carrier: Courier
4. Was the COC complete, i.e., signatures, dates/times, requested analyses?	Yes	
5. Were all samples received within holding time? Note: Analysis, such as pH which should be conducted in the field, i.e, 15 minute hold time, are not included in this disucssion.	Yes	

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

Attachment 5

Jackson Unit #003

DTGW Borehole Location - 32.211769, -103.561897

WELL RECORD & LOG

OFFICE OF THE STATE ENGINEER

www.ose.state.nm.us

1. GENERAL AND WELL LOCATION

OSE POD NO. (WELL NO.)	WELL TAG ID NO.	OSE FILE NO(S).
C 04867		C-4867

WELL OWNER NAME(S)	PHONE (OPTIONAL)
Tap Rock Resources	

WELL OWNER MAILING ADDRESS	CITY	STATE	ZIP
523 Park Point DR. Suite 200	Golden	CO	80401

WELL LOCATION (FROM GPS)		DEGREES	MINUTES	SECONDS	
	LATITUDE	32	12	42.39	N
	LONGITUDE	-103	33	42.85	W

* ACCURACY REQUIRED: ONE TENTH OF A SECOND

* 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.	NAME OF LICENSED DRILLER	NAME OF WELL DRILLING COMPANY
1833	Jason Maley	Vision Resources

DRILLING STARTED	DRILLING ENDED	DEPTH OF COMPLETED WELL (FT)	BORE HOLE DEPTH (FT)	DEPTH WATER FIRST ENCOUNTERED (FT)
8-22-24	8-22-24	105'	105'	N/A

COMPLETED WELL IS: ☐ ARTESIAN *add Centralizer info below ☑ DRY HOLE ☐ SHALLOW (UNCONFINED)

STATIC WATER LEVEL IN COMPLETED WELL (FT): 0'

DATE STATIC MEASURED: 8-22-24

DRILLING FLUID: ☑ AIR ☐ MUD ADDITIVES – SPECIFY:

DRILLING METHOD: ☑ ROTARY ☐ HAMMER ☐ CABLE TOOL ☐ OTHER – SPECIFY:

CHECK HERE IF PITLESS ADAPTER IS INSTALLED ☐

DEPTH (feet bgl) FROM	DEPTH (feet bgl) 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	DEPTH (feet bgl) TO	BORE HOLE DIAM. (inches)	LIST ANNULAR SEAL MATERIAL AND GRAVEL PACK SIZE-RANGE BY INTERVAL *(if using Centralizers for Artesian wells- indicate the spacing below)	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) FROM	DEPTH (feet bgl) TO	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)
0	20	20'	white caliche	Y ✓ N	
20	90	70'	Red clay with small rock	Y ✓ N	
90	105	15'	Red and Gray clay	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:

☐ PUMP ☐ AIR LIFT ☐ BAILER ☐ OTHER – SPECIFY: Dry hole

TOTAL ESTIMATED WELL YIELD (gpm): 0

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:

Jason Maley — Jason Maley — 08-27-2024

SIGNATURE OF DRILLER / PRINT SIGNEE NAME — DATE

FOR OSE INTERNAL USE — WR-20 WELL RECORD & LOG (Version 09/22/2022)

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

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-04867

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: 8-26-24 Date well plugging concluded: 8-26-24

5) GPS Well Location: Latitude: 32 deg, 12 min, 42.39 sec
Longitude: -103 deg, 33 min, 42.85 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: 8-1-24

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

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

For each interval plugged, describe within the following columns:

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

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

III. SIGNATURE:

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

Signature of Well Driller

08-27-2024
Date

Version: September 8, 2009
Page 2 of 2

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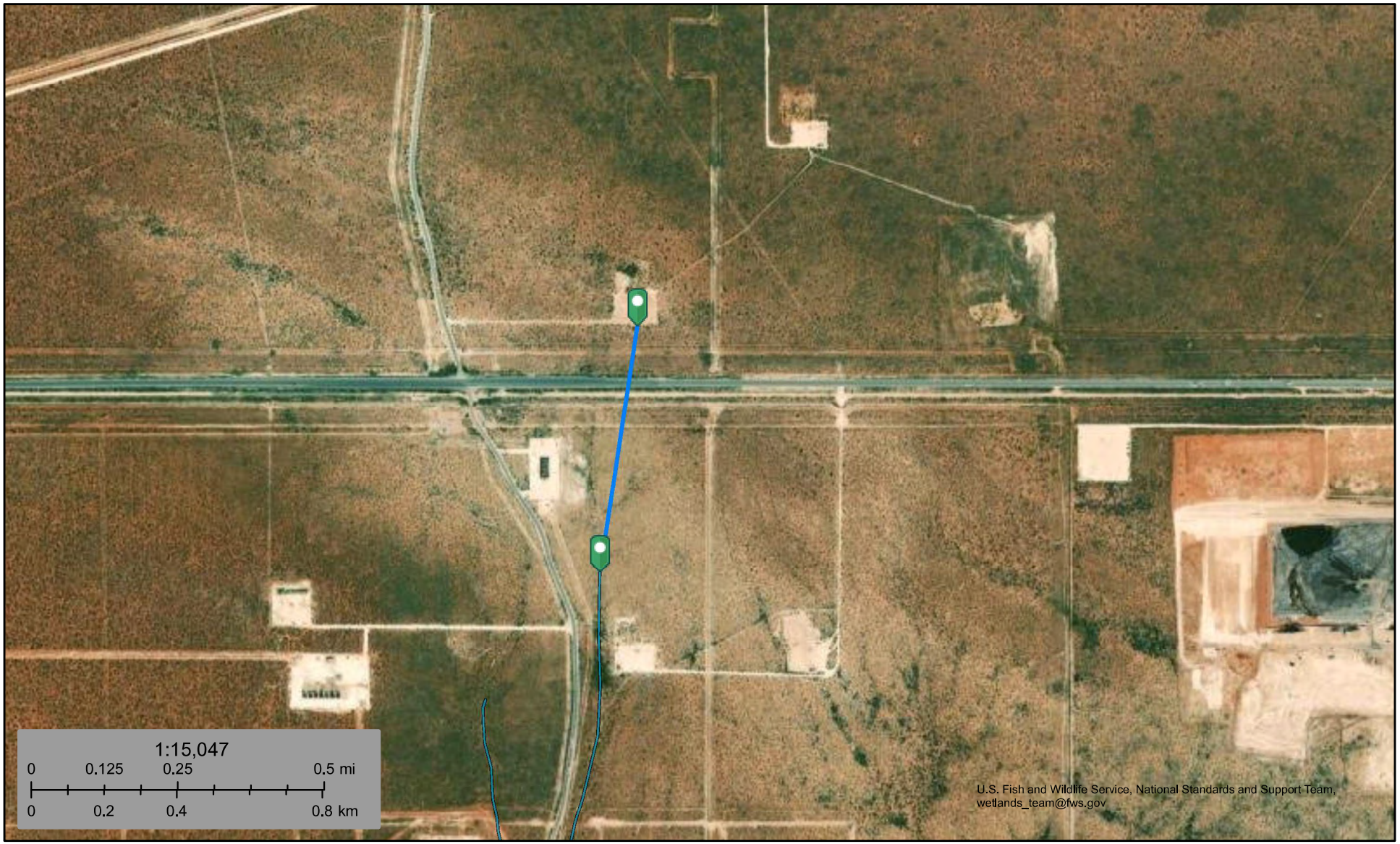
U.S. Fish and Wildlife Service
National Wetlands Inventory

Intermittent 1896 feet



July 6, 2024

Wetlands

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

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National Wetlands Inventory (NWI)
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U.S. Fish and Wildlife Service
National Wetlands Inventory

Pond 8,861 feet

July 6, 2024

Wetlands

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

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National Wetlands Inventory (NWI)
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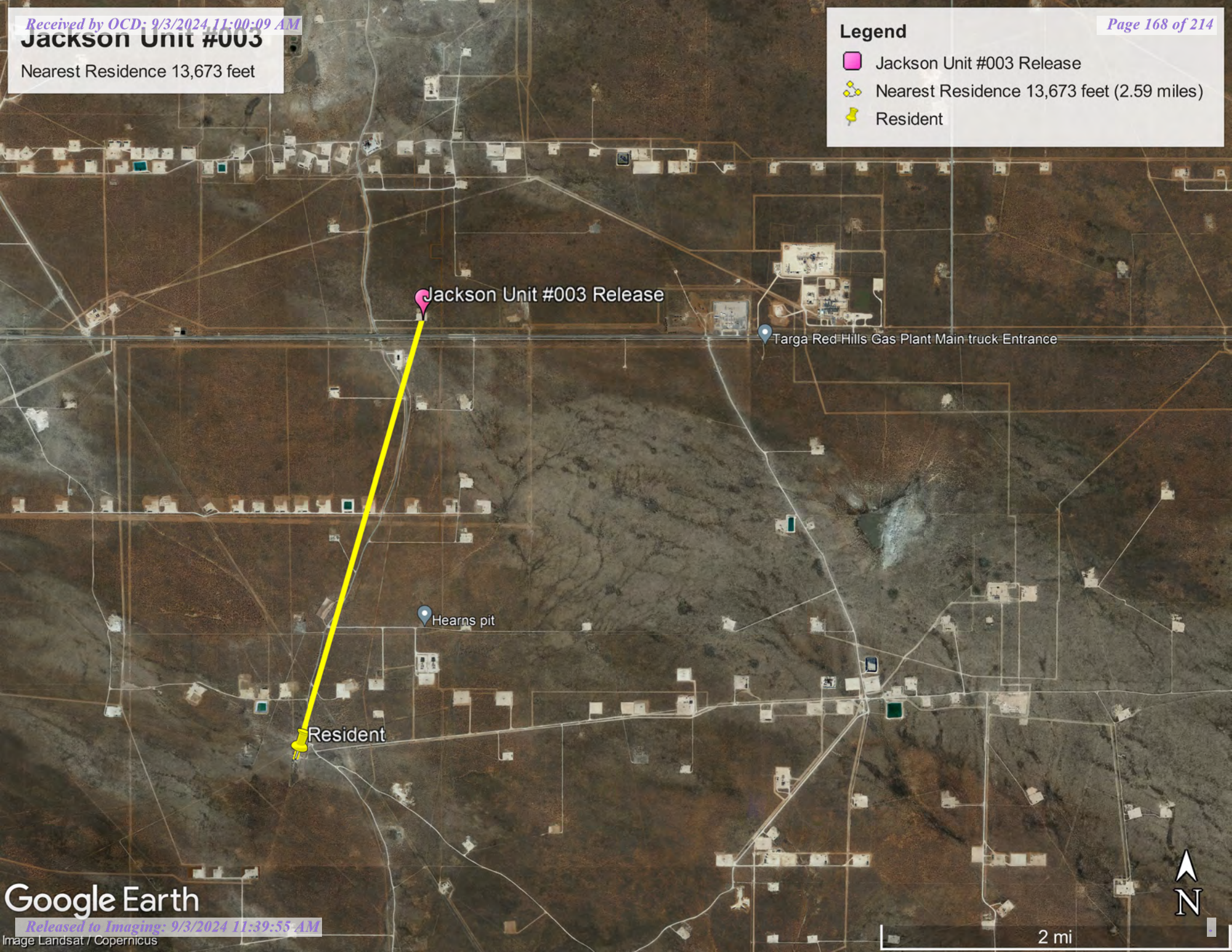
Jackson Unit #003

Nearest Residence 13,673 feet

Legend

- Jackson Unit #003 Release
- Nearest Residence 13,673 feet (2.59 miles)
- Resident



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New Mexico Office of the State Engineer

Active & Inactive Points of Diversion

(with Ownership Information)

(acre ft per annum) (R=POD has been replaced and no longer serves this file, C=the file is closed) (quarters are 1=NW 2=NE 3=SW 4=SE) (quarters are smallest to largest) (NAD83 UTM in meters)

WR File Nbr	Sub basin	Use	Diversion	Owner	County	POD Number	Well Tag	Code	Grant	Source	q 64	q 16	q 4	Sec	Twn	Rng	X	Y	Distance
C 03585	CUB	EXP	0	INTERCONTINENTAL POTASH CORP	LE	C 03585 POD3					1	2	3	15	24S	33E	635393	3565270	464
					LE	C 03585 POD2					1	2	3	15	24S	33E	635418	3565363	550
					LE	C 03585 POD1					3	4	1	15	24S	33E	635368	3565544	737
C 03565	CUB	EXP	0	INTERCONTINENTAL POTASH CORP	LE	C 03565 POD8						4	1	15	24S	33E	635484	3565610	791
C 03585	CUB	EXP	0	INTERCONTINENTAL POTASH CORP	LE	C 03585 POD4					4	4	1	15	24S	33E	635485	3565610	792
					LE	C 03585 POD5					1	2	4	15	24S	33E	636245	3565387	937
C 03565	CUB	EXP	0	INTERCONTINENTAL POTASH CORP	LE	C 03565 POD9						4	4	15	24S	33E	636429	3565005	948
C 03585	CUB	EXP	0	INTERCONTINENTAL POTASH CORP	LE	C 03585 POD6					2	4	4	15	24S	33E	636431	3565007	950
C 04339	CUB	MON	0	OWL LANDFILL SERVICES LLC	LE	C 04339 POD7	NA				4	4	2	23	24S	33E	636473	3564011	1264
					LE	C 04339 POD8					1	1	3	23	24S	33E	636518	3563681	1527
C 03565	CUB	EXP	0	INTERCONTINENTAL POTASH CORP	LE	C 03565 POD6						3	3	10	24S	33E	635022	3566373	1626
C 04822	CUB	MON	0	TAP ROCK RESOURCES	LE	C 04822 POD1	NA				2	2	3	16	24S	33E	633904	3565271	1658
C 04339	CUB	MON	0	OWL LANDFILL SERVICES LLC	LE	C 04339 POD1	NA				1	3	3	23	24S	33E	636525	3563309	1825
C 03662	C	DOL	3	MARK MCCLOY (M&M RANCH)	LE	C 03662 POD1				Shallow	3	1	2	23	24S	33E	637342	3564428	1883
C 03727	C	PRO	0	EOG RESOURCES INC	LE	C 03662 POD1				Shallow	3	1	2	23	24S	33E	637342	3564428	1883
C 03728	C	PRO	0	EOG RESOURCES INC	LE	C 03662 POD1				Shallow	3	1	2	23	24S	33E	637342	3564428	1883
C 03729	C	PRO	0	EOG RESOURCES INC	LE	C 03662 POD1				Shallow	3	1	2	23	24S	33E	637342	3564428	1883
C 04339	CUB	MON	0	OWL LANDFILL SERVICES LLC	LE	C 04339 POD6	NA				3	1	2	23	24S	33E	637340	3564386	1890
C 04824	CUB	MON	0	TAP ROCK RESOURCES	LE	C 04824 POD1	NA				1	1	2	16	24S	33E	634112	3566203	1960
C 04339	CUB	MON	0	OWL LANDFILL SERVICES LLC	LE	C 04339 POD2	NA				2	3	3	23	24S	33E	636789	3563315	1980

Record Count: 20

UTMNAD83 Radius Search (in meters):

Easting (X): 635500 **Northing (Y):** 3564819 **Radius:** 2000

Sorted by: Distance

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New Mexico Office of the State Engineer
Water Right Summary

get image list

WR File Number: C 03565 **Subbasin:** CUB **Cross Reference:** -

Primary Purpose: EXP EXPLORATION

Primary Status:

Total Acres: **Subfile:** - **Header:** -

Total Diversion: 0 **Cause/Case:** -

Owner: INTERCONTINENTAL POTASH CORP

Contact: TOM COPE

Documents on File

	Trn #	Doc	File/Act	Status 1	Status 2	Transaction Desc.	From/ To	Acres	Diversion	Consumptive
get images	509298	EXPL	2012-08-07	PMT	APR	C 03565	T	0	0	

Current Points of Diversion

(NAD83 UTM in meters)

POD Number	Well Tag	Source	Q 64	Q16	Q4	Sec	Tws	Rng	X	Y	Other Location Desc
C 03565 POD1			1	4	06	24S	33E		630871	3568316	ICP-083
C 03565 POD2			3	4	07	24S	33E		631156	3566515	ICP-084
C 03565 POD3			3	4	08	24S	33E		632763	3566546	ICP-085
C 03565 POD4			4	1	09	24S	33E		633672	3567057	ICP-086
C 03565 POD5			3	4	09	24S	33E		634135	3566496	ICP-87
C 03565 POD6			3	3	10	24S	33E		635022	3566373	ICP-089
C 03565 POD7			2	2	06	24S	33E		631361	3569250	ICP-090
C 03565 POD8			4	1	15	24S	33E		635485	3565610	ICP-092
C 03565 POD9			4	4	15	24S	33E		636430	3565005	ICP-093

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U.S. Fish and Wildlife Service
National Wetlands Inventory

6,225 ft. / 1.18 miles

June 29, 2024

Wetlands

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

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National Wetlands Inventory (NWI)
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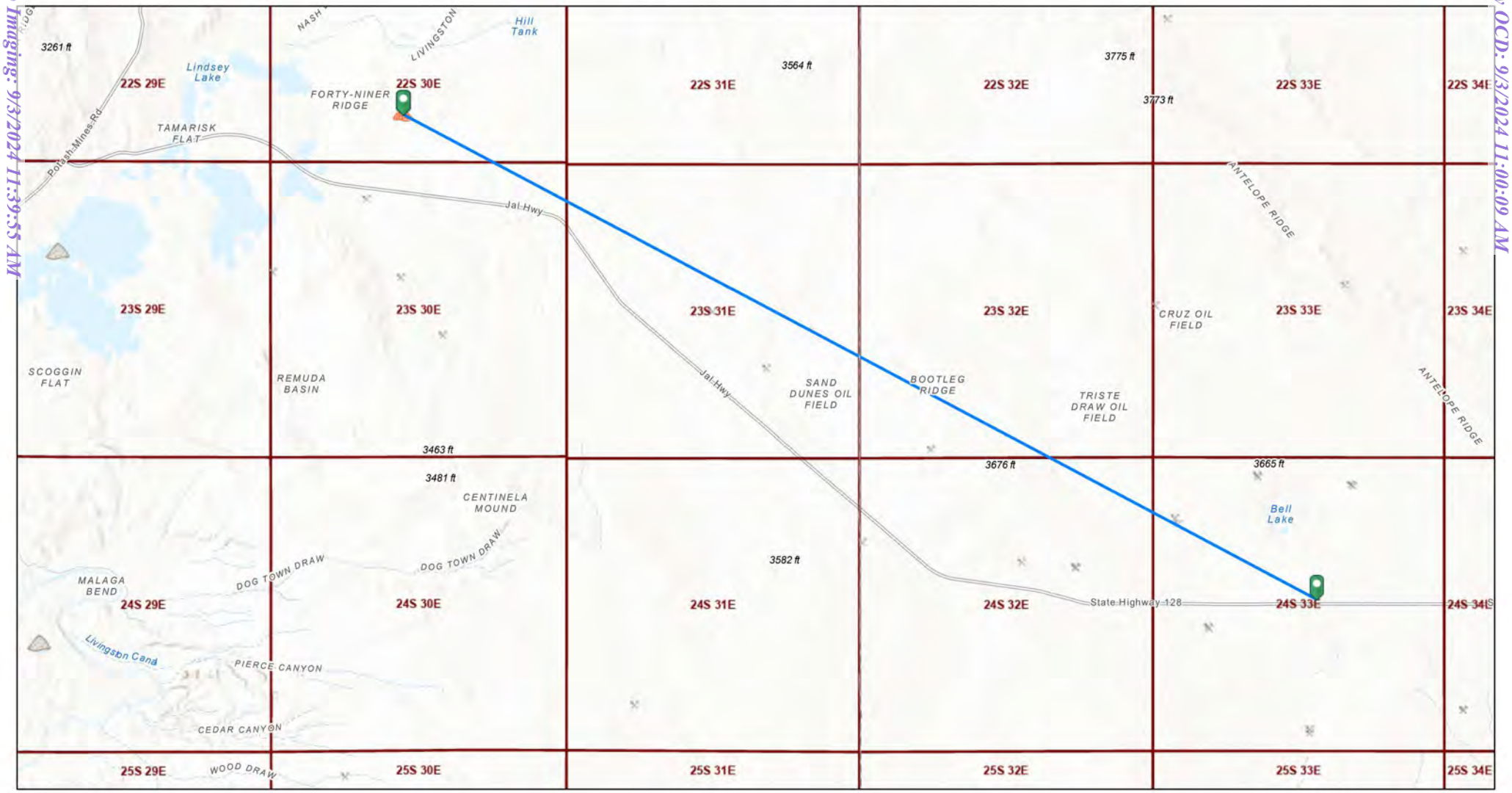
Potash Mine 112,000 feet



7/6/2024, 11:06:59 AM

1:144,448

Registered Mines

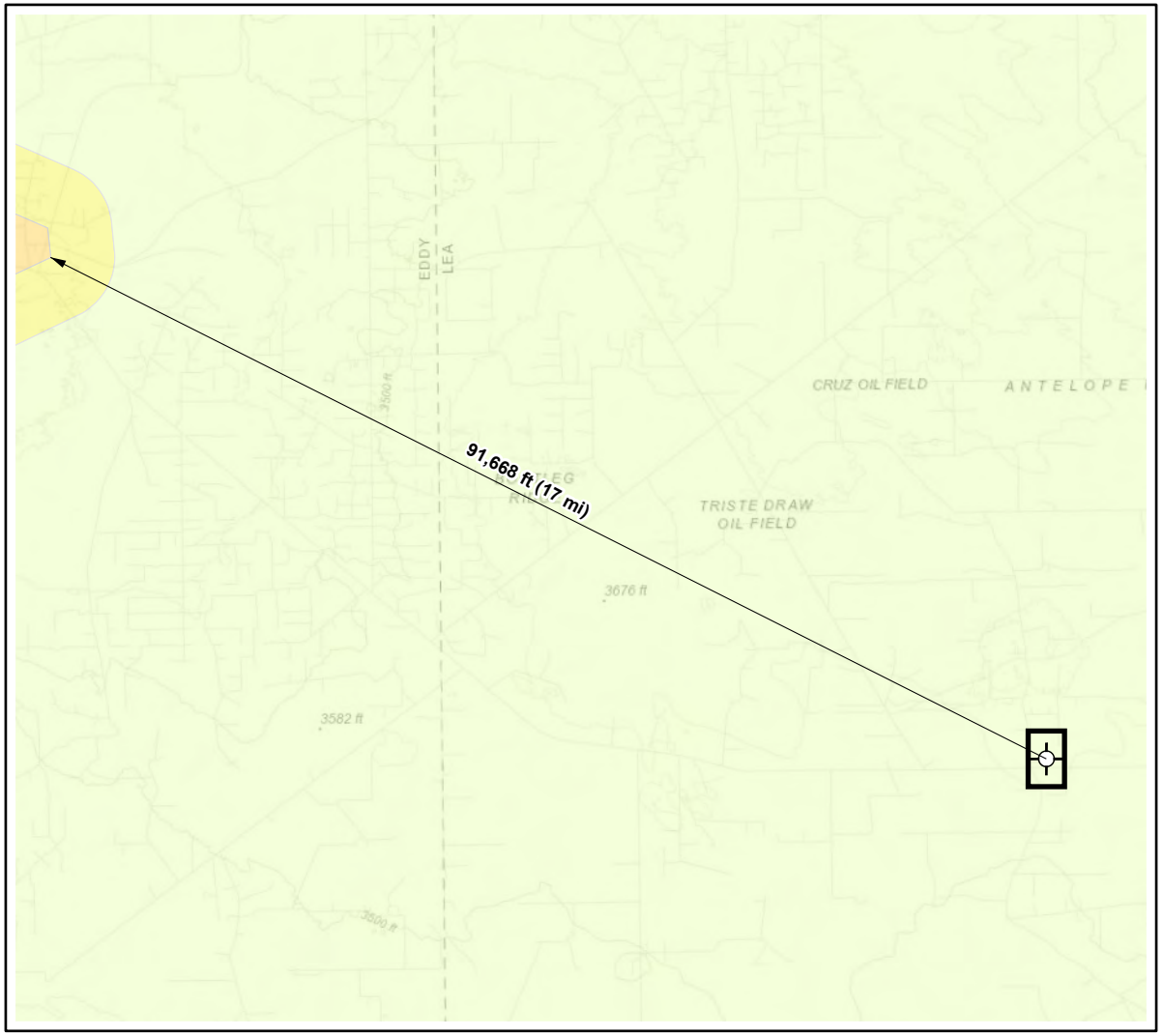
- Aggregate, Stone etc.
- Aggregate, Stone etc.
- Aggregate, Stone etc.
- Potash
- Salt
- PLSS Townships

0 1.5 3 6 mi

0 2.5 5 10 km

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

EMNRD MMD GIS Coordinator
NM Energy, Minerals and Natural Resources Department (http://nm-emnrd.maps.arcgis.com/apps/webappviewer/index.html?id=1b5e577974664d689b47790897ca2795)



Karst Potential

- Critical
- High
- Medium
- Low

- Site Location
- Site Buffer (1000 ft)

Overview Map
0 0.5 1 2 mi

Detail Map
0 150 300 600 ft

VERTEX

Map Center:
Lat/Long
32.212196°,-103.562317°

NAD 1983 UTM Zone 13N
Date: Jul 03/24

N

Karst Potential Map
Jackson Unit #003

Figure:
X

TAP ROCK RESOURCES

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

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

VERSATILITY. EXPERTISE.

Document Path: G:\1-Projects_US PROJECTS\Tap Rock\2024\24E-03316\Project\24E-03316.aprx

Received by OCD: 9/3/2024 11:00:09 AM

National Flood Hazard Layer FIRMette

FEMA

103°34'3"W 32°12'59"N

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

1:6,000

103°33'26"W 32°12'29"N

Basemap Imagery Source: USGS National Map 2023

Legend

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

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

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

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

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

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

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

N

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

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

The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on 6/29/2024 at 1:33 PM and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time.

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

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Jackson Unit #003

Nearest FEMA Zone A:
67,208 ft.
12.73 miles

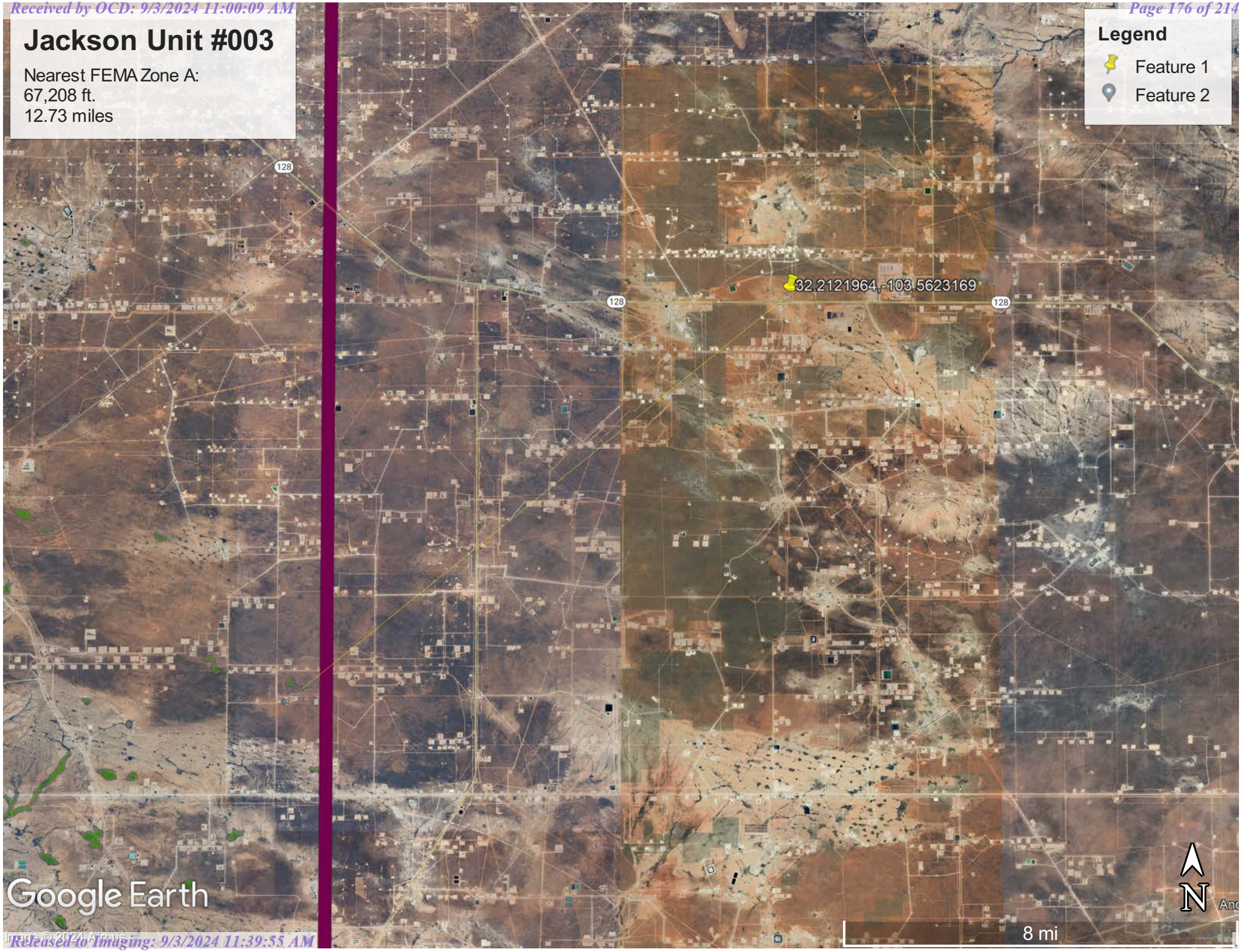

Image © 2024 Airbus

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

June 29, 2024

Preface

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

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

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

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

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

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

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Contents

How Soil Surveys Are Made

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

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

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

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

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

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

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

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

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

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

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

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

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

Soil Map

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

Custom Soil Resource Report
Soil Map

MAP LEGEND

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

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

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

Water Features
- Streams and Canals

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

Background
- Aerial Photography

MAP INFORMATION

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

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

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

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

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

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

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

Soil Survey Area: 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.

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
BH	Berino-Cacique association, hummocky	0.1	4.4%
SR	Simona-Upton association	2.8	95.6%
Totals for Area of Interest		**2.9**	**100.0%**

Map Unit Descriptions

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

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

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

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

onsite investigation is needed to define and locate the soils and miscellaneous areas.

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

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

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

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

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

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

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

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

Lea County, New Mexico

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
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

Dune land

Percent of map unit: 1 percent
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
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

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

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USDA Natural Resources Conservation Service

Ecological site R070BD002NM
Shallow Sandy

Accessed: 06/29/2024

General information

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

Figure 1. Mapped extent

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

Associated sites

R070BD004NM	**Sandy** Sandy sites often occur in association or in a complex with Shallow Sandy Sites.

Similar sites

R070BD004NM	**Sandy** Sandy ecological sites are similar to Shallow Sandy sites in species composition and Transition pathways.

Table 1. Dominant plant species

Tree	Not specified
Shrub	Not specified
Herbaceous	Not specified

Physiographic features

This site occures on plains, alluvial fans, uplands, or fan piedmonts. The parent material consists of mixed loamy alluvium or eolian material derived from igneous and sedimentory bedrock. The petrocalcic layer is at a depth of 10 to 25 inches and undulating.

Slopes are nearly level to undulating, usually less than 9 percent. Elevations range from 2,842 to 4,500 feet.

Table 2. Representative physiographic features

Landforms	(1) Plain (2) Fan piedmont (3) Alluvial fan
Elevation	2,842–4,500 ft
Slope	1–9%
Aspect	Aspect is not a significant factor

Climatic features

The average annual precipitation ranges from 8 to 13 inches. Variations of 5 inches, more or less, are common.

Over 80 percent of the precipitation falls from April through October. Most of the summer precipitation comes in the form of high intensity – short duration thunderstorms.
Temperatures are characterized by distinct seasonal changes and large annual and diurnal temperature changes. The average annual temperature is 61 degrees with extremes of 25 degrees below zero in the winter to 112 degrees in the summer.
The average frost-free season is from 207 to 220 days. The last killing frost is in late March or early April, and the first killing frost is in late October or early November.
Temperature and rainfall both favor warm season perennial plant growth. In years of abundant spring moisture, annual forbs and cool season grasses can make up an important component of the site. The vegetation of this site can take advantage of the moisture and the time it falls. Because of the soil profile, little moisture can be stored in the soil for any length of time. Moisture is readily available to the plants from the time it falls. Strong winds from the southwest blow from January through June which rapidly dries out the soil profile during a critical period for plant growth.

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

Table 3. Representative climatic features

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

Influencing water features

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

Soil features

Soils are very shallow to shallow, less than 20 inches in depth. Surface and subsurface textures are gravelly loamy sand, gravelly fine sandy loam or fine sandy loam.

An indurated calache layer occurs at depths of 6 to 25 inches and is at an average of 15 inches from the surface. Underlying material textures are very gravelly fine sandy loam, very gravelly sandy loam, gravelly fine sandy loam. Gravels are calcium carbonate concretions, calcium carbonate content ranges from 30 to 65 percent.

The indurated caliche layer typically holds water up in the profile for short periods within the root zone of plants. These soils will blow if left unprotected by vegetation.

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

Characteristic soils are:
Simona
Jerag

Table 4. Representative soil features

Surface texture	(1) Fine sandy loam (2) Loamy fine sand (3) Gravelly fine sandy loam
Family particle size	(1) Loamy
Drainage class	Well drained to moderately well drained
Permeability class	Moderately slow to moderate

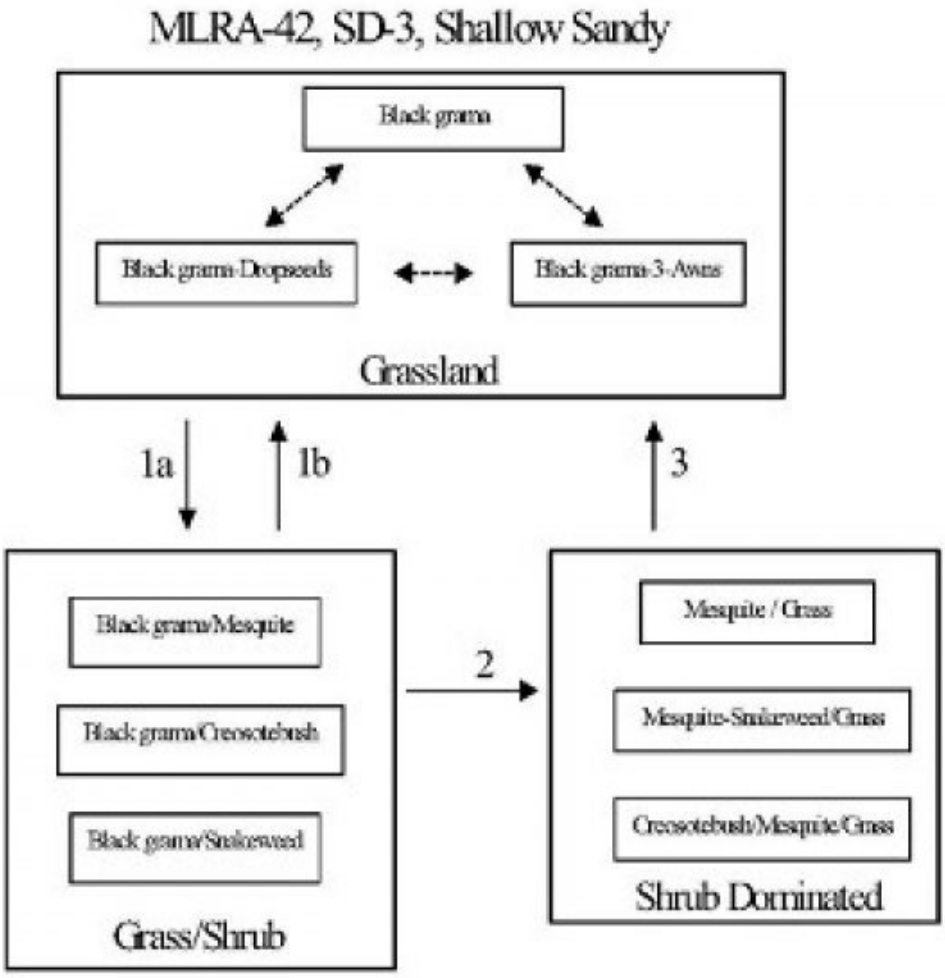
Soil depth	7–24 in
Surface fragment cover <=3"	5–25%
Surface fragment cover >3"	0%
Available water capacity (0-40in)	1–2 in
Calcium carbonate equivalent (0-40in)	5–15%
Electrical conductivity (0-40in)	0–4 mmhos/cm
Sodium adsorption ratio (0-40in)	0
Soil reaction (1:1 water) (0-40in)	7.4–8
Subsurface fragment volume <=3" (Depth not specified)	5–25%
Subsurface fragment volume >3" (Depth not specified)	0%

Ecological dynamics

Overview
The Shallow Sandy site occurs on upland plains, and tops of low ridges and mesas, associated with Sandy, Loamy Sand, and Shallow sites. Coarse to moderately coarse soil surface textures, shallow depth (<20 inches) to an indurated caliche layer (petrocalcic horizon), and an overwhelming dominance by black grama help to distinguish this site. The historic plant community of the Shallow Sandy site is a black grama dominated grassland sparsely dotted with shrubs. Shrubs, especially mesquite and creosotebush can increase or colonize due to the dispersal of shrub seeds by livestock or wildlife. This increase in mesquite and colonization of creosotebush may be enhanced by proximity to areas with existing high shrub densities. Fire suppression, and the loss of grass cover due to overgrazing or drought may facilitate the increase and encroachment of shrubs. Persistent loss of grass cover, competition for resources by shrubs, and periods of climate with increased winter precipitation and dry summers, may initiate the transition to a shrub-dominated state.

State and transition model

Plant Communities and Transitional Pathways (diagram)



1a. Seed dispersal, drought, overgrazing, fire suppression.
1b. Prescribed fire, brush control, prescribed grazing.

2. Persistent loss of grass cover, resource competition, increased winter precipitation.

3. Brush control, range seeding, prescribed grazing.

State 1
Historic Climax Plant Community

Community 1.1
Historic Climax Plant Community

Grassland: This site responds well to management and is resistant to state change, due to the shallow depth to petrocalcic horizon and sandy surface textures. The sandy surface textures allow rapid water infiltration and the petrocalcic horizon helps to keep water perched and available to shallow rooted grasses. Black grama is the dominant species in the historic plant community, averaging 50 to 60 percent of the total production for this site. Bush muhly, blue grama, and dropseeds are present as sub-dominants. Typically, yucca, javalinabush, range ratany, prickly pear, and mesquite are sparsely dotted across the landscape. Leatherweed croton, cutleaf

happlopappus, wooly groundsel, and threadleaf groundsel are common forbs. Continuous heavy grazing or extended periods of drought will cause a loss of grass cover characterized by a decrease in black grama, bush muhly, blue and sideoats grama, plains bristlegrass, and Arizona cottontop. Dropseeds and or threeawns may increase and become sub-dominant to black grama. Continued loss of grass cover in conjunction with dispersal of shrub seeds and fire suppression is believed to cause the transition to a state with increased amounts of shrubs (Grass/Shrub state). Diagnosis: Black grama is the dominant grass species. Grass cover uniformly distributed. Shrubs are a minor component averaging only two to five percent canopy cover. Litter cover is high (40-50 percent of area), and litter movement is limited to smaller size class litter and short distances (<. 5m). Other grasses that could appear on this site would include: six-weeks grama, fluffgrass, false-buffalograss, hairy grama, little bluestem, bristle panicum, cane bluestem, Indian ricegrass, tridens spp., and red lovegrass. Other woody plants include: pricklypear, cholla, fourwing saltbush, catclaw mimosa, winterfat, American tarbush and mesquite. Other forbs include: globemallow, verbena, desert holly, senna, plains blackfoot, trailing fleabane, fiddleneck, deerstongue, wooly Indianwheat, and locoweed.

Table 5. Annual production by plant type

Plant Type	Low (Lb/Acre)	Representative Value (Lb/Acre)	High (Lb/Acre)
Grass/Grasslike	474	652	830
Forb	78	107	136
Shrub/Vine	48	66	84
Total	**600**	**825**	**1050**

Table 6. Ground cover

Tree foliar cover	0%
Shrub/vine/liana foliar cover	0%
Grass/grasslike foliar cover	30-35%
Forb foliar cover	0%
Non-vascular plants	0%
Biological crusts	0%
Litter	40-50%
Surface fragments >0.25" and <=3"	0%
Surface fragments >3"	0%
Bedrock	0%
Water	0%
Bare ground	15-25%

Figure 5. Plant community growth curve (percent production by month). NM2802, R042XC002NM-Shallow Sandy-HCPC. SD-3 Shallow Sandy - Warm season plant community.

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

State 2
Grass/Shrub

Community 2.1
Grass/Shrub

Grass/Shrub: This state is characterized by the notable presence of shrubs, especially mesquite, broom snakeweed, and/or creosotebush, however grasses remain as the dominant species. Black grama is the dominant

grass species. Threeawns and or dropseeds are sub-dominant. The susceptibility of the Shallow Sandy site to shrub encroachment may be higher when located adjacent to other sites with high densities of mesquite or creosotebush. Retrogression within this site is characterized by decreases in grass cover and increasing densities of shrubs. Diagnosis: Black grama remains as the dominant grass species. Grass cover varies in response to the amount of shrub increase, ranging from uniform to patchy. Shrubs are found at increased densities relative to the grassland state, especially mesquite, creosotebush, or broom snakeweed. Transition to Grass/Shrub (1a) Historically fire may have kept mesquite and other shrubs in check by completely killing some species and disrupting seed production cycles and suppressing the establishment of shrub seedlings in others. Fire suppression combined with seed dispersal by livestock and wildlife is believed to be the factors responsible for the establishment and increase in shrubs.1, 3 Loss of grass cover due to overgrazing, prolonged periods of drought, or their combination, reduces fire fuel loads and increases the susceptibility of the site to shrub establishment. Key indicators of approach to transition: Increase in the relative abundance of dropseeds and threeawns Presence of shrub seedlings Loss of organic matter—evidenced by an increase in physical soil crusts 8 Transition back to Grassland (1b) Brush control is necessary to initiate the transition back to the grassland state. If adequate fuel loads remain, possibly the reintroduction of fire as a management tool will assist in the transition back, however, mixed results have been observed concerning the effects of fire on black grama grasslands.6 Prescribed grazing will help ensure adequate rest following brush control and will assist in the establishment and maintenance of grass cover capable of sustaining fire.

State 3
Shrub Dominated

Community 3.1
Shrub Dominated

Shrub-Dominated: Across the range of soil types included in the Shallow Sandy site, mesquite is typically the dominant shrub, but it does occur as a co-dominant or sub-dominant species with creosotebush or broom snakeweed. Mesquite tends to dominate when the Shallow Sandy site occurs as part of a complex or in association with Sandy or Loamy Sand sites. Creosotebush tends to dominate on Shallow Sandy sites that occur as part of, or adjacent to Shallow Sites. Broom snakeweed increases in response to heavy grazing, but tends to cycle in and out depending on timing of rainfall. However, once the site is dominated by shrubs and snakeweed becomes well established, it tends to remain as a major component in the shrub dominated state. Diagnosis: Mesquite, creosotebush, or snakeweed cover is high, exceeding that of grasses. Grass cover is patchy with large connected bare areas present. Black grama, threeawns, or dropseeds may be the dominant grass. Evidence of accelerated wind erosion in the form of pedestalling of plants, and soil deposition around shrub bases may be common. Transition to Shrub-Dominated (2) Persistent loss of grass cover and the resulting increased competition between shrubs and remaining grasses for dwindling resources (especially soil moisture) may drive this transition.5 Additionally periods of increased winter precipitation may facilitate periodic episodes of shrub expansion and establishment. 4 Key indicators of approach to transition: Increase in size and frequency of bare patches. Loss of grass cover in shrub interspaces. Increased signs of erosion, evidenced by pedestalling of plants, and soil and litter deposition on leeward side of plants. 7 Transition back to Grassland (3) Brush control is necessary to reduce competition from shrubs and reestablish grasses. Range seeding may be necessary if insufficient grasses remain, The benefits, and costs, will vary depending upon the degree of site degradation, and adequate precipitation following seeding.

Additional community tables

Table 7. Community 1.1 plant community composition

Group	Common Name	Symbol	Scientific Name	Annual Production (Lb/Acre)	Foliar Cover (%)
Grass/Grasslike					
1	**Warm Season**			413–495	
	black grama	BOER4	*Bouteloua eriopoda*	413–495	–
2	**Warm Season**			41–83	
	bush muhly	MUPO2	*Muhlenbergia porteri*	41–83	–
3	**Warm Season**			41–83	

	blue grama	BOGR2	*Bouteloua gracilis*	41–83	–
4	**Warm Season**			25–41	
	sideoats grama	BOCU	*Bouteloua curtipendula*	25–41	–
5	**Warm Season**			41–83	
	spike dropseed	SPCO4	*Sporobolus contractus*	41–83	–
	sand dropseed	SPCR	*Sporobolus cryptandrus*	41–83	–
	mesa dropseed	SPFL2	*Sporobolus flexuosus*	41–83	–
6	**Warm Season**			17–41	
	threeawn	ARIST	*Aristida*	17–41	–
7	**Warm Season**			41–83	
	Arizona cottontop	DICA8	*Digitaria californica*	41–83	–
	plains bristlegrass	SEVU2	*Setaria vulpiseta*	41–83	–
8	**Warm Season**			41–83	
	mat sandbur	CELO3	*Cenchrus longispinus*	41–83	–
	hooded windmill grass	CHCU2	*Chloris cucullata*	41–83	–
9	**Other Perennial Grasses**			25–41	
	Grass, perennial	2GP	*Grass, perennial*	25–41	–
Shrub/Vine					
10	**Shrub**			8–25	
	javelina bush	COER5	*Condalia ericoides*	8–25	–
11	**Shrub**			8–25	
	yucca	YUCCA	*Yucca*	8–25	–
12	**Shrub**			8–25	
	jointfir	EPHED	*Ephedra*	8–25	–
	littleleaf ratany	KRER	*Krameria erecta*	8–25	–
13	**Shrub**			8–25	
	featherplume	DAFO	*Dalea formosa*	8–25	–
14	**Shrub**			8–25	
	broom snakeweed	GUSA2	*Gutierrezia sarothrae*	8–25	–
15	**Other Shrubs**			25–41	
	Shrub (>.5m)	2SHRUB	*Shrub (>.5m)*	25–41	–
Forb					
16	**Forb**			17–41	
	leatherweed	CRPOP	*Croton pottsii var. pottsii*	17–41	–
	Goodding's tansyaster	MAPIG2	*Machaeranthera pinnatifida ssp. gooddingii var. gooddingii*	17–41	–
17	**Forb**			17–41	
	woolly groundsel	PACA15	*Packera cana*	17–41	–
	threadleaf ragwort	SEFLF	*Senecio flaccidus var. flaccidus*	17–41	–
18	**Forb**			8–25	
	whitest evening primrose	OEAL	*Oenothera albicaulis*	8–25	–
19	**Other Forbs**			8–25	
	Forb (herbaceous, not grass nor grass-like)	2FORB	*Forb (herbaceous, not grass nor grass-like)*	8–25	–

Animal community

This site provides habitats which support a resident animal community that is characterized by pronghorn antelope, swift fox, black-tailed jackrabbit, spotted ground squirrel, Ord's kangaroo rat, northern grasshopper mouse, coyote, horned lark, meadowlark, lark bunting, scaled quail, morning dove, side-blotched lizard, round-tailed horned lizard, marbled whiptail, prairie rattlesnake and ornate box turtle.

Hydrological functions

The runoff curve numbers are determined by field investigations using hydraulic cover conditions and hydrologic soil groups.

Hydrologic Interpretations
Soil Series Hydrologic Group
Jarag D
Simona D

Recreational uses

This site offers recreation for hiking, horseback riding, nature observation and photography, and quail and dove hunting. During years of abundant spring moisture, this site displays a riot of color from wildflowers during May and June. A few summer and fall flowers also occur.

Wood products

The natural potential plant community of this site affords little or no wood products. Where the site has been invaded by mesquite or cholla cactus the roots and stems of these plants provide attractive material for a variety of curiosities, such as lamps and small furniture.

Other products

This site is suitable for grazing by all kinds and classes of livestock during all seasons of the year. Because of the sandy textures and shallow profile, this site will respond rapidly to management. As this site deteriorates, plants such as black grama, bush muhly, blue and sideoats grama, plains bristlegrass and Arizona cottontop, will decrease and be replaced by plants such as threeawns, mesquite, creosote bush, and broom snakeweed. This also causes a decrease in ground cover, leaving the soil to blow. This site responds best to a system of management that rotates the season of use.

Other information

Guide to Suggested Initial Stocking Rate Acres per Animal Unit Month
Similarity Index Ac/AUM
100 - 76 2.5 – 3.5
75 – 51 3.2 – 4.6
50 – 26 4.5 – 7.5
25 – 0 7.6 +

Inventory data references

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

Other references

Literature References:

1. Brooks, M.L. and D.A. Pyke. 2001. Invasive plants and fire in the deserts of North America. Pages 1–14 in K.E.M. Galley and T.P. Wilson (eds.). Proceedings of the Invasive Species Workshop: the Role of Fire in the Control and Spread of Invasive Species.

2. Hennessy, J.T., R.P. Gibbens, J.M. Tromble, and M. Cardenas. 1983. Water properties of caliche. J. Range Manage. 36: 723-726.

3. Humphrey, R.R. 1974. Fire in the deserts and desert grassland of North America. In: Kozlowski, T. T.; Ahlgren, C. E., eds. Fire and ecosystems. New York: Academic Press: 365-400.

4. Moir, W.H., and J. A. Ludwig. 1991. Plant succession and changing land features in desert grasslands. P. 15-18. In P.F. Ffolliott and W.T. Swank (eds.) People and the temperate region: a summary of research from the United States Man and the Biosphere Program 1991. U.S. Dept. State, Publ No. 9839, Nat. Tech. Info. Serv., U.S. Dept. Commerce, Springfield, Illinois. 63 p.

5. Tiedemann, A. R. and J. O. Klemmedson. 1977. Effect of mesquite trees on vegetation and soils in the desert grassland. J. Range Manage. 30: 361-367.

6. U.S. Department of Agriculture, Forest Service, Rocky Mountain Research Station, Fire Sciences Laboratory (2002, September). Fire Effects Information System, [Online]. Available: http://www.fs.fed.us/database/feis/ [accessed 2/10/03].

7. U.S. Department of Agriculture, Natural Resources Conservation Service. 2001. Soil Quality Information Sheets. Rangeland Soil Quality—Wind Erosion. Rangeland Sheet 10 [Online]. Available: http://www.statlab.iastate.edu/survey/SQI/range.html

8. U.S. Department of Agriculture, Natural Resources Conservation Service. 2001. Soil Quality Information Sheets. Rangeland Soil Quality—Physical and Biological Soil Crusts. Rangeland Sheet 7 [Online]. Available: http://www.statlab.iastate.edu/survey/SQI/range.html

Contributors

David Trujillo
Don Sylvester

Rangeland health reference sheet

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

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

Indicators

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

---

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

---

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

---

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

---

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

---

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

---

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

---

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

---

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

---

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

---

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

---

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

    Dominant:

    Sub-dominant:

    Other:

    Additional:

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

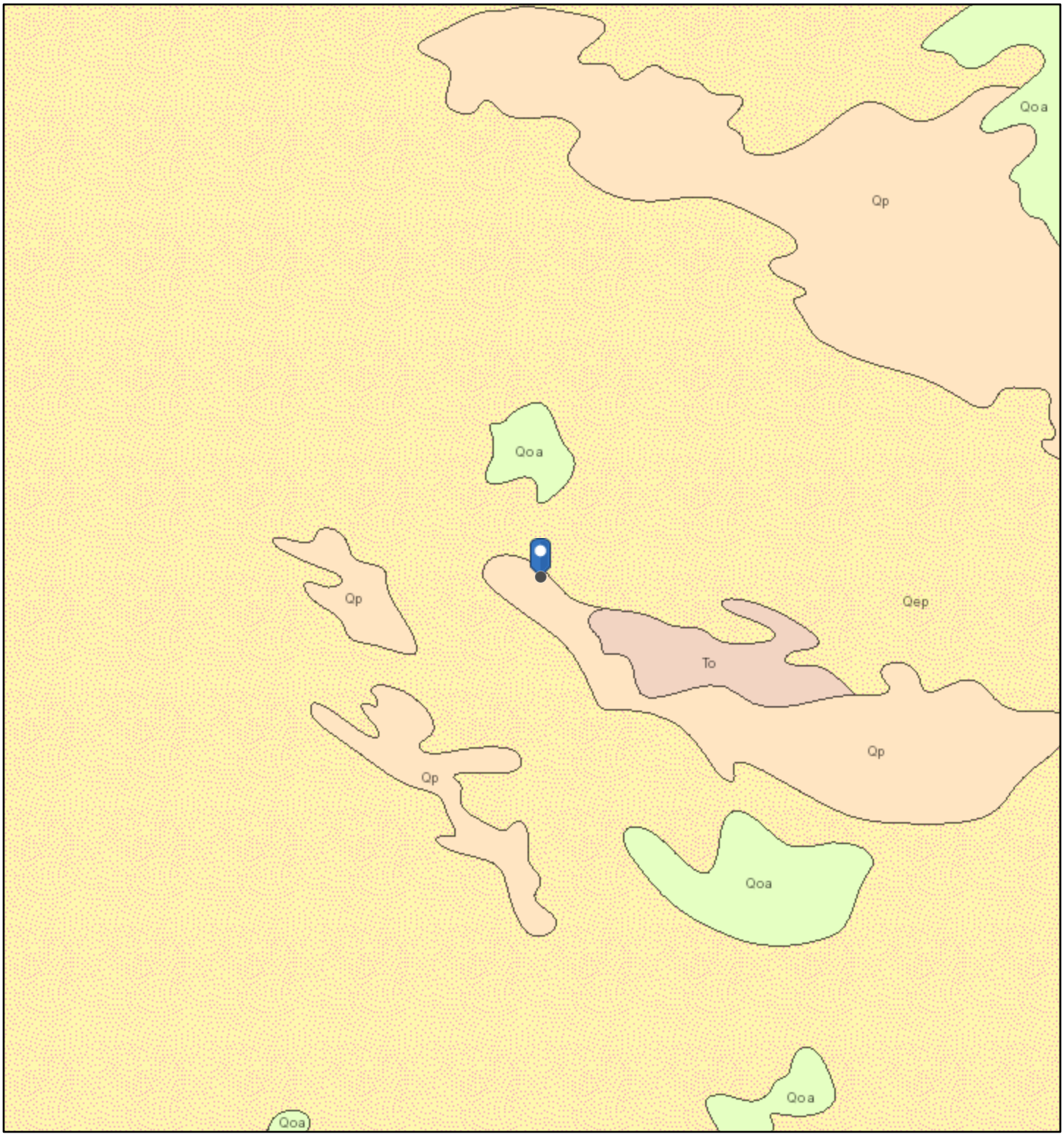
14. **Average percent litter cover (%) and depth (in):**

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

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

17. **Perennial plant reproductive capability:**

ArcGIS Web Map



6/29/2024, 11:53:16 AM

1:144,448

0 1 2 4 mi

0 1.5 3 6 km

Lithologic Units

- Playa——Alluvium and evaporite deposits (Holocene)
- Water——Perenial standing water
- Qa——Alluvium (Holocene to upper Pleistocene)

Esri, NASA, NGA, USGS, NMBGMR, USGS The National Map: National Boundaries Dataset, 3DEP Elevation Program, Geographic Names Information System, National Hydrography Dataset, National Land Cover Database, National Structures Dataset, and National Transportation Dataset; USGS Global Ecosystems; U.S. Census Bureau TIGER/Line data; USFS

ArcGIS Web AppBuilder

USGS The National Map: National Boundaries Dataset, 3DEP Elevation Program, Geographic Names Information System, National Hydrography Dataset, National Land Cover Database, National

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QUESTIONS

Action 380051

QUESTIONS

Operator: TAP ROCK OPERATING, LLC 523 Park Point Drive Golden, CO 80401	OGRID: 372043
	Action Number: 380051
	Action Type: [C-141] Site Char./Remediation Plan C-141 (C-141-v-Plan)

QUESTIONS

Prerequisites	
Incident ID (n#)	**nSAP0215477198**
Incident Name	**NSAP0215477198 JACKSON UNIT #003 @ 30-025-33238**
Incident Type	**Oil Release**
Incident Status	**Remediation Plan Received**
Incident Well	**[30-025-33238] JACKSON UNIT #003**

Location of Release Source	
Please answer all the questions in this group.	
Site Name	Jackson Unit #003
Date Release Discovered	06/03/2002
Surface Owner	State

Incident Details	
Please answer all the questions in this group.	
Incident Type	Oil 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	Cause: Equipment Failure | | Crude Oil | Released: 200 BBL | Recovered: 0 BBL | Lost: 200 BBL.
Produced Water Released (bbls) Details	*Not answered.*
Is the concentration of chloride in the produced water >10,000 mg/l	*Not answered.*
Condensate Released (bbls) Details	*Not answered.*
Natural Gas Vented (Mcf) Details	*Not answered.*
Natural Gas Flared (Mcf) Details	*Not answered.*
Other Released Details	*Not answered.*
Are there additional details for the questions above (i.e. any answer containing Other, Specify, Unknown, and/or Fire, or any negative lost amounts)	*Not answered.*

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QUESTIONS (continued)

Operator: TAP ROCK OPERATING, LLC 523 Park Point Drive Golden, CO 80401	OGRID: 372043
	Action Number: 380051
	Action Type: [C-141] Site Char./Remediation Plan C-141 (C-141-v-Plan)

QUESTIONS

Nature and Volume of Release (continued)	
Is this a gas only submission (i.e. only significant Mcf values reported)	**No, according to supplied volumes this does not appear to be a "gas only" report.**
Was this a major release as defined by Subsection A of 19.15.29.7 NMAC	**Yes**
Reasons why this would be considered a submission for a notification of a major release	**From paragraph A. "Major release" determine using:** **(1) an unauthorized release of a volume, excluding gases, of 25 barrels or more.**
With the implementation of the 19.15.27 NMAC (05/25/2021), venting and/or flaring of natural gas (i.e. gas only) are to be submitted on the C-129 form.	

Initial Response	
The responsible party must undertake the following actions immediately unless they could create a safety hazard that would result in injury.	
The source of the release has been stopped	True
The impacted area has been secured to protect human health and the environment	True
Released materials have been contained via the use of berms or dikes, absorbent pads, or other containment devices	True
All free liquids and recoverable materials have been removed and managed appropriately	True
If all the actions described above have not been undertaken, explain why	*Not answered.*
Per Paragraph (4) of Subsection B of 19.15.29.8 NMAC the responsible party may commence remediation immediately after discovery of a release. If remediation has begun, please prepare and attach a narrative of actions to date in the follow-up C-141 submission. If remedial efforts have been successfully completed or if the release occurred within a lined containment area (see Subparagraph (a) of Paragraph (5) of Subsection A of 19.15.29.11 NMAC), please prepare and attach all information needed for closure evaluation in the follow-up C-141 submission.	

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

I hereby agree and sign off to the above statement	Name: Chance Dixon Title: Project Manager Email: cdixon@vertex.ca Date: 09/03/2024

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QUESTIONS (continued)

Operator: TAP ROCK OPERATING, LLC 523 Park Point Drive Golden, CO 80401	OGRID: 372043
	Action Number: 380051
	Action Type: [C-141] Site Char./Remediation Plan C-141 (C-141-v-Plan)

QUESTIONS

Site Characterization	
Please answer all the questions in this group (only required when seeking remediation plan approval and beyond). This information must be provided to the appropriate district office no later than 90 days after the release discovery date.	
What is the shallowest depth to groundwater beneath the area affected by the release in feet below ground surface (ft bgs)	Between 100 and 500 (ft.)
What method was used to determine the depth to ground water	NM OSE iWaters Database Search
Did this release impact groundwater or surface water	No
What is the minimum distance, between the closest lateral extents of the release and the following surface areas:	
A continuously flowing watercourse or any other significant watercourse	Between 1000 (ft.) and ½ (mi.)
Any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark)	Between 1 and 5 (mi.)
An occupied permanent residence, school, hospital, institution, or church	Between 1 and 5 (mi.)
A spring or a private domestic fresh water well used by less than five households for domestic or stock watering purposes	Between ½ and 1 (mi.)
Any other fresh water well or spring	Between ½ and 1 (mi.)
Incorporated municipal boundaries or a defined municipal fresh water well field	Greater than 5 (mi.)
A wetland	Between 1 and 5 (mi.)
A subsurface mine	Greater than 5 (mi.)
An (non-karst) unstable area	Greater than 5 (mi.)
Categorize the risk of this well / site being in a karst geology	Low
A 100-year floodplain	Greater than 5 (mi.)
Did the release impact areas not on an exploration, development, production, or storage site	No

Remediation Plan	
Please answer all the questions that apply or are indicated. This information must be provided to the appropriate district office no later than 90 days after the release discovery date.	
Requesting a remediation plan approval with this submission	Yes
Attach a comprehensive report demonstrating the lateral and vertical extents of soil contamination associated with the release have been determined, pursuant to 19.15.29.11 NMAC and 19.15.29.13 NMAC.	
Have the lateral and vertical extents of contamination been fully delineated	Yes
Was this release entirely contained within a lined containment area	No
Soil Contamination Sampling: (Provide the highest observable value for each, in milligrams per kilograms.)	
Chloride (EPA 300.0 or SM4500 Cl B)	404
TPH (GRO+DRO+MRO) (EPA SW-846 Method 8015M)	3262.8
GRO+DRO (EPA SW-846 Method 8015M)	2931.8
BTEX (EPA SW-846 Method 8021B or 8260B)	17.9
Benzene (EPA SW-846 Method 8021B or 8260B)	1.2
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	08/16/2024
On what date will (or did) the final sampling or liner inspection occur	08/16/2024
On what date will (or was) the remediation complete(d)	09/04/2024
What is the estimated surface area (in square feet) that will be reclaimed	1100
What is the estimated volume (in cubic yards) that will be reclaimed	360
What is the estimated surface area (in square feet) that will be remediated	1100
What is the estimated volume (in cubic yards) that will be remediated	360
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 (continued)

Operator: TAP ROCK OPERATING, LLC 523 Park Point Drive Golden, CO 80401	OGRID: 372043
	Action Number: 380051
	Action Type: [C-141] Site Char./Remediation Plan C-141 (C-141-v-Plan)

QUESTIONS

Remediation Plan (continued)	
Please answer all the questions that apply or are indicated. This information must be provided to the appropriate district office no later than 90 days after the release discovery date.	
This remediation will (or is expected to) utilize the following processes to remediate / reduce contaminants:	
(Select all answers below that apply.)	
(Ex Situ) Excavation and **off-site** disposal (i.e. dig and haul, hydrovac, etc.)	Yes
Which OCD approved facility will be used for **off-site** disposal	LEA LAND LANDFILL [fEEM0112342028]
OR which OCD approved well (API) will be used for **off-site** disposal	*Not answered.*
OR is the **off-site** disposal site, to be used, out-of-state	*Not answered.*
OR is the **off-site** disposal site, to be used, an NMED facility	*Not answered.*
(Ex Situ) Excavation and **on-site** remediation (i.e. On-Site Land Farms)	*Not answered.*
(In Situ) Soil Vapor Extraction	*Not answered.*
(In Situ) Chemical processing (i.e. Soil Shredding, Potassium Permanganate, etc.)	*Not answered.*
(In Situ) Biological processing (i.e. Microbes / Fertilizer, etc.)	*Not answered.*
(In Situ) Physical processing (i.e. Soil Washing, Gypsum, Disking, etc.)	*Not answered.*
Ground Water Abatement pursuant to 19.15.30 NMAC	*Not answered.*
OTHER (Non-listed remedial process)	*Not answered.*
Per Subsection B of 19.15.29.11 NMAC unless the site characterization report includes completed efforts at remediation, the report must include a proposed remediation plan in accordance with 19.15.29.12 NMAC, which includes the anticipated timelines for beginning and completing the remediation.	
I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.	
I hereby agree and sign off to the above statement	Name: Chance Dixon Title: Project Manager Email: cdixon@vertex.ca Date: 09/03/2024
The OCD recognizes that proposed remediation measures may have to be minimally adjusted in accordance with the physical realities encountered during remediation. If the responsible party has any need to significantly deviate from the remediation plan proposed, then it should consult with the division to determine if another remediation plan submission is required.	

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QUESTIONS (continued)

Operator: TAP ROCK OPERATING, LLC 523 Park Point Drive Golden, CO 80401	OGRID: 372043
	Action Number: 380051
	Action Type: [C-141] Site Char./Remediation Plan C-141 (C-141-v-Plan)

QUESTIONS

Deferral Requests Only	
Only answer the questions in this group if seeking a deferral upon approval this submission. Each of the following items must be confirmed as part of any request for deferral of remediation.	
Requesting a deferral of the remediation closure due date with the approval of this submission	No

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QUESTIONS (continued)

Operator: TAP ROCK OPERATING, LLC 523 Park Point Drive Golden, CO 80401	OGRID: 372043
	Action Number: 380051
	Action Type: [C-141] Site Char./Remediation Plan C-141 (C-141-v-Plan)

QUESTIONS

Sampling Event Information	
Last sampling notification (C-141N) recorded	**379792**
Sampling date pursuant to Subparagraph (a) of Paragraph (1) of Subsection D of 19.15.29.12 NMAC	**09/04/2024**
What was the (estimated) number of samples that were to be gathered	**4**
What was the sampling surface area in square feet	**800**

Remediation Closure Request	
Only answer the questions in this group if seeking remediation closure for this release because all remediation steps have been completed.	
Requesting a remediation closure approval with this submission	No

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CONDITIONS

Action 380051

CONDITIONS

Operator:	OGRID:
TAP ROCK OPERATING, LLC 523 Park Point Drive Golden, CO 80401	372043
	Action Number: 380051
	Action Type: [C-141] Site Char./Remediation Plan C-141 (C-141-v-Plan)

CONDITIONS

Created By	Condition	Condition Date
bhall	Remediation plan conditionally approved.	9/3/2024
bhall	OCD will not approve the excavation depths proposed in the remediation plan as field conditions/analytical data may dictate additional excavation may be warranted. OCD approves soil excavation to the extent of the known impact above the remediation closure criteria for areas where depth to groundwater is greater than 100 feet and the upper 4 feet must meet the strictest standards as per 19.15.29.13 NMAC.	9/3/2024
bhall	This site is no longer reasonably needed for production or subsequent drilling activities and must be reclaimed at the time of remediation. A reclamation report will not be accepted until reclamation of the release area is complete and meets the requirements of 19.15.29.13 NMAC.	9/3/2024
bhall	The reclamation report will need to include: Executive Summary of the reclamation activities; Scaled Site Map including sampling locations; Analytical results including, but not limited to, results showing that any remaining impacts meet the reclamation standards and results to prove the backfill is non-waste containing; At least one (1) representative 5-point composite sample will need to be collected from the backfill material that will be used for the reclamation of the top four feet of the excavation. OCD reserves the right to request additional sampling if needed; pictures of the backfilled areas showing that the area is back, as nearly as practical, to the original condition or the final land use and maintain those areas to control dust and minimize erosion to the extent practical; pictures of the top layer, which is either the background thickness of topsoil or one foot of suitable material to establish vegetation at the site, whichever is greater; and a revegetation plan.	9/3/2024
bhall	The site must be revegetated as early as practicable. A revegetation report will not be accepted until revegetation of the release area is complete and meets the requirements of 19.15.29.13 NMAC.	9/3/2024
bhall	All revegetation activities will need to be documented and included in the revegetation report. The revegetation report will need to include: An executive summary of the revegetation activities including: Seed mix, Method of seeding, dates of when the release area was reseeded, information pertinent to inspections, information about any amendments added to the soil, information on how the vegetative cover established meets the life-form ratio of plus or minus fifty percent of pre-disturbance levels and a total percent plant cover of at least seventy percent of pre-disturbance levels, excluding noxious weeds per 19.15.29.13 D.(3) NMAC, and any additional information; a scaled Site Map including area that was revegetated in square feet; and pictures of the revegetated areas during reseeding activities, inspections, and final pictures when revegetation is achieved.	9/3/2024
bhall	Per 19.15.29.13 E. NMAC, if a reclamation and revegetation report has been submitted to the surface owner, it may be used if the requirements of the surface owner provide equal or better protection of freshwater, human health, and the environment. A copy of the approval of the reclamation and revegetation report from the surface owner and a copy of the approved reclamation and revegetation report will need to be submitted to the OCD via the Permitting website.	9/3/2024
bhall	Submit a complete and accurate remediation closure report and/or reclamation report through the OCD Permitting website by 12/6/2024.	9/3/2024